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Smyth, William Henry

Technocracy

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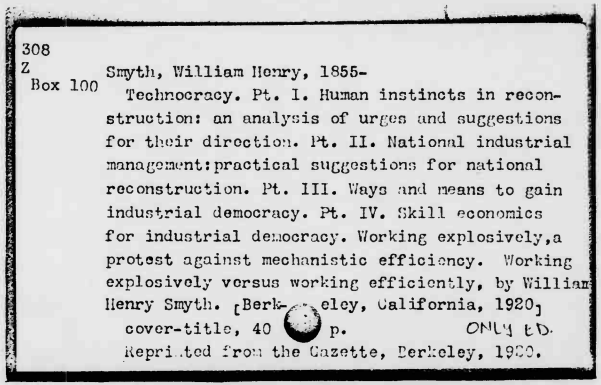

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W H Smyth.

TECHNOCRACY

PART I.
Human Instincts in Reconstruction:
An Analysis of Urges and Suggestions for Their Direction.

PART II.
National Industrial Management:
Practical Suggestions for National Reconstruction.

PART III.
Ways and Means
To Gain Industrial Democracy.

PART IV.
Skill Economics
For Industrial Democracy.

WORKING EXPLOSIVELY
A Protest Against Mechanistic Efficiency.

WORKING EXPLOSIVELY
VERSUS
WORKING EFFICIENTLY

By William Henry Smyth

IS WEALTH MORE PRECIOUS THAN
HUMAN PERSONALITY?

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Technocracy

PART I.

Human Instincts in Reconstruction.
An Analysis of Urges and a Suggestion For Their Direction.

By William Henry Smyth

Note—The author shows that the forces of the four great human instincts—to live, to make, to take, to control—are as essential in modern social life as at any time in the past. But all of these urges in a living democracy should be controlled without being controlled. To achieve this seeming paradox we must have a great national purpose, and unselfish leadership such as could come through a National Council of Scientists.

Mr. William Henry Smyth has been in general practice as a consulting engineer since 1879. He is the inventor of many machines and mechanical devices, including a system of raising water by direct explosion on its surface, the device being known as the "direct explosion pump." He has been an engineering expert in many patent cases, and is a frequent contributor to technical journals. As well as a pioneer in mechanics, Mr. Smyth is a pioneer in economics. He is a member of the leading scholarly associations in that field, including the American Economic Association and the Royal Economic Society of Great Britain.

Parts I, II and III appeared originally in "Industrial Management" of New York. The concluding PartIV has not heretofore been published and will appear exclusively in The Gazette.—Editor.

Instincts Control.

Instincts are the most persistent human urge factors. Seemingly, they are less subject to change than even the most unchanging aspects of our physical environment.

The Instinct to Live (self-preservation) is as dominating today as in the days of our cave-man ancestors; the Instinct to Construct is as persistent in Man as in the beaver; the Mastery Instinct (desire to control others) is as vital as ever; the Thievish Instinct (desire to acquire and hoard) shows no change, and is the same old urge as that disclosed by the pre-man stores of insects, birds and various animals.

Indeed, without these primordial urges Man could not have developed, and the loss or atrophy of any one of them would probably mean the rapid extinction of the race. Thus it would seem that our fundamental instincts are essentially necessary to human continuance—at least, to our social existence. So let us look once more at these vital factors, in the light of recent events, in order to see what part they now take and are likely to play in our future social economy.

Brute Force.

No lesson of the war, probably, is more obvious or more clearly defined than the rapid trend toward Skill as a predominating and controlling factor in our immediate social development.

Recorded history and archaeological investigation confirm the suggestion that in the matter of economic control of human activities and their products, the possession of this control has oscillated to and fro under

the influence of one or other of the instinctive urges, so that characteristic types of men secured alternate mastery.

Starting in the pre-human period, before the dawn of definite self-consciousness, and continuing during eons in the twilight of human intelligence, raw brute force must have been the dominating economic factor.

The influence of Skill during this period was practically negligible, except in so far as it affected individuals. Of this the huge prolongation of the unchanging "Stone Age" is sufficient demonstration.

Contest With Cunning.

The gradual growth and rapid culmination of the Skill factor is an important consideration in our present inquiry and likewise in our Social Reconstruction problems. For while Purposive Skill is of slow development Purposive Cunning, on the contrary, is inherently otherwise. Indeed, Cunning and Purposiveness both imply mental alertness and hence are in some wise synonymous.

For these reasons, in the early stages of human development, raw strength and animal cunning must alone have contended to satisfy the other instinctive urges—to live, to control—practically uninfluenced by the relatively modern urge of Purposeful Skill.

Doubtless this simple conflict (of raw strength and brute cunning) waged with varying results, slowly oscillating, age by age and race by race, in favor of one or other human type as environmental conditions or racial admixtures gave one or other the advantage of circumstance.

And, as Economics implies: the usages, laws, and institutions whereby a community endeavors to organize its methods and means of living: those whose activities characterize the times initiate and administer its economics.

Age-Long See-Saw.

So, with these age-long oscillations of control types, economic institutions necessarily underwent like changes, conforming to the dominating human characteristics of each Age and Nation. That they did so oscillate and economically conform, in the vaguest dawn of human beginnings, is the teaching of archaeology.

During the past few thousand years the contest of Strength and Cunning is shown by reliable historical records to have oscillated with comparative rapidity between one and the other extreme—including considerable periods during which Strength and Cunning unified control by union of Church and State.

Prior to the immediate present was a transition stage caused by the gradual weakening of the bond between Church and State, with a coincidental shifting of control in favor of Cunning (under a changed and relatively modern guise representing the instinctive Urge to Take) expressing itself as Commercialism. With this change came a consequent modification of usages, laws, and institutions appropriate to its highest expression—Capitalism—capitalistic economics. The result of this last oscillation of control in favor of (acquisitive) Cunning was that Germany became a nation of slaves, England a nation of paupers, France quit breeding, and the United States went wealth crazy!

Challenge by Purposive Skill.

The war represents the conclusive termination (in this period) of the age-long contest of Force and Cunning—for the control of men, and the products of their activity.

But this last and most spectacular conflict is complicated by the intrusion of the most modern and most rapidly developing factor—Organized Purposive Skill.

Here, then, Skill enters the arena with a challenge to both earlier contestants—for the prize of human control, and mastery of the social machinery; enters that contest—older than the race itself—the struggle to satisfy the primordial instincts: to Live—to Control—to Take.

Strength vs. Cunning vs. Skill.

Thus the contest has become a triangular fight between the Strong, the Cunning, and the Skilful; a fight

in which raw brute force is a participant of rapidly diminishing importance—a modified continuation of the old time bloody contest, for a humanly undesirable outcome.

Cunning-control is today the victor, and in possession of the spoils—the financial wealth of the world. But all the evidence points to a short enjoyment and a losing fight against the organized forces of Purposeful Skill.

Creaking Capitalism Cracking.

Capitalism—under war stress—shows convincing evidence of inadequacy. The non-effectiveness of money and credit wealth has become so obvious as to procure the enactment of "Work or Fight" laws. Thus, into the discard went our pre-war money evaluation of men to be substituted by a standard which measures millionaire and hobo alike in accordance with their relative skill.

Our pre-war faith in the mysterious Magic of Money too received a staggering shock when all the private fortunes enmassed and all the billions of national credit combined utterly failed to add a single pound of much needed sugar to our limited supply, necessitating the "two pounds of sugar per person" apportionment—a commonplace vulgar fraction measure applicable to Financial Potentate and Weary Willie—alike!

Producer Versus Parasite.

On broader lines also the evidence points the same way: purposive skill is inherently productive, while purposeful cunning is naturally parasitic. Then, the capability of cunning to rule, and the continuance of its success in controlling others, resides in and depends upon the stupidity and illiteracy of the governed: mystery and magic are its weapons—equally in the realm of modern Finance as in the ancient Theocracies.

Skill implies the reverse of all this, for skill is intelligence physically manifested. It is knowledge of Nature's Laws utilized dexterously—and the spread of scientific information characterizes our age. Thus as the bulwarks of cunning-control crumble, the weapons of skill are multiplied and perfected.

So the outcome seems a foregone conclusion.

With this outcome, our methods of life will necessarily change. Capitalistic customs, laws, and institutions will be substituted by others differing as widely from those with which we are familiar as the motor ideas and ideals of purposeful cunning differ from those of purposeful skill.

"Work or Fight" Lesson.

Peradventure, the "Work or Fight" and the "2 pounds of sugar per person" measures are tonic foretastes of the coming Skill-Economics.

Obviously we are in transition to a new social order.

The signs of the times portend the dethroning of decadent acquisitive capitalism and the crowning of productive skill—Autocrat of the new Age—Artizanism.

This change has been in dubious process for years; the War has merely speeded its progress and made the outcome practically inevitable. But, whether it be brought about by evolution or revolution, or whether it comes in clean-cut aspect or befogged by irrelevant social factors and forces, it is in no sense a rational or final solution of our "social problem."

In any event, should Artizanism come, it will be merely another social spasm, probably shorter than, but equally as futile as, our present world-wide finance madness.

Instincts Not A Rational Basis.

While it is conceivable that human societies could be organized upon and with any one of the stated basic Instincts as dominant factor and raison d'etre; it is practically certain that any such national society would be quite ineffective, and transient. For obviously it would not and could not satisfy even our present limited intelligence, our rational imagination, or our modern spiritual ideals.

No very extended analysis would be required to show the validity of this proposition. The past has already demonstrated the insufficiency of societies based upon the Mastery Instinct—Autocracy. The present amply

proves the failure of the Acquisitive Instinct as a social basis—Plutocracy.

A moment's thought will show that a society based upon the Making Instinct would simply crumble in its formative process under the demands of our complicated modern mental make-up, for clearly this instinct provides inadequate Human scope—and hence presupposes parasitism in even more extended form than that of acquisitive Capitalism. And — worse than all—a society based upon the Instinct to Live and Propagate, would return us at once to the brute state from which we have arisen through ages of struggle, strife, and bloodshed.

Control Without Control.

Still, it is apparent that the basic instincts which urge "to live," "to make," "to take," "to control," are as useful, yes, are as essential in and to modern social life as they have been in all the past. But, while all are necessary, no one of them constitutes a proper basis—law of operation—for a rational human society organization. They are factors, necessary and desirable contributary parts, no one of which is inherently adapted to function as the machine's unifier, its strain and speed equalizer—its control element.

Thus, the determination of a suitable character of "control" element is seemingly the crux of our social problem; the problem of controlling without control, that old, old paradox: Freedom made effective by restraint—a paradox, however, which the war may have resolved for us, by demonstrating its non-existence.

It has, in somewise, answered our troublous question by clear definition in the statement of the Nation's object in going to war.

The war has answered the question, in another aspect, by the Nation's adoption of the method (forced upon it by logical compulsion) whereby success was achieved.

"To make the World safe for Democracy" is the clearest and most universally accepted statement of our purpose in going to war—Self-government for Nations, Self-government for Individuals.

Concept of Control.

Control by others, then, is antithetical to the ideals for which we have waged this last, the greatest, and, it is hoped, the final bloody contest for Self-government.

Control is equally antithetical to our Ideals of Self-government whether the control is exercised by "others" characterized by the Instinct to live and breed—the Masses; or whether the control is exercised by "others" characterized by the Instinct to Make—the Skilled Artizan; or whether the control is exercised by "others" urged by the Instinct of Mastery—the Employers; or whether the control is exercised by "others" under their dominating Acquisitive Instinct — the Financiers.

Indeed, the concept: control by "others," is an idea inherent in and appropriate only to now discredited Autocracy—a concept which the War has rendered an obsolete ideal—if we are yet intelligent enough to profit by its costly teaching.

Discard Cave-Man Control.

To be rationally consistent this "control" concept should be as absent as it is obsolete (in fact and effect) in our inevitable reconstruction.

This Autocracy "control" concept must be thrown in the discard where we have dumped the European autocrats whose ideal it was—if our reconstruction efforts are intended to produce a rationally organized Modern Human Society; a Society founded upon the Ideals consecrated by the life blood of our bravest and best.

But our age-long familiarity with "control by others," in our halting progress, from brute beast to modern Man, has so deeply ingrained in our mental fiber this stone-age concept as to make it almost impossible for us to even conceive the idea of a society lacking this cave-man spiked-club element.

Yet, no fact and lesson of our participation in the War is more clear and free from doubt than the spontaneous acquiescence by the people of the United States—rich and poor, artizan and laborer, alike—in self-control, self-repression, self-dedication to the united will and unified purpose of the Nation.

Purpose.

No lesson of the War is more significant than: Given a National Purpose, intelligently comprehended and acquiesced in—only unselfish Leadership is needed, and neither control by force nor control by cunning is necessary to bring about the unification of effort needed to accomplish the Nation's Objective.

The significance of this lesson is the utter irrationality of national control in the hands of any class characterized by self-centered instincts, or that strength or skill or cunning should be dominating factors in the social structure.

Though none of these factors should dominate, each and all of these vital and necessary elements should have free scope for the socially effective outflow of its particular expression of life energy.

Second only in significance to the acquiescence and co-operation of the united people is the method irresistibly forced upon the Nation by the logic and necessities of its stupendous War problem.

First Real Nation.

This most modern economic institution, and the unified co-operation of the united people, are the two outstanding lessons of the War for us.

Taken together, they point significantly to the solution of our social problem—the lacking element which should and could consciously, deliberately, and rationally unify the basic instinctive urges into an harmonious direction of national effort and so produce a humanly efficient national organization—the first real Nation on earth!

The lacking element?—the element which is adapted to assume the function and position to be vacated by the obsolescent autocratic concept—arbitrary "control"—the element capable of controlling without control, of making Freedom effective, Democracy a living fact as well as a noble Ideal!

In this, as in many other seemingly difficult problems of long standing, the solution has evaded us by reason of its very obviousness. Such a unifying factor has always existed in plain view—unutilized in its proper function of Social Strain Equalizer. Indeed, this urge factor, more even than the Instincts—"to Live," "to Make," "to Take," "to Control"—is the most universal and most humanly characterizing trait of that most marvelous complex—Man.

Desire to Know.

I refer to Curiosity—curiosity rationalized into Desire to Know.

Desire to Know, while equally urgent for gratification, inherently lacks the undesirable and inappropriate qualities which render the other human Instincts unsuitable as organizing and strain equalizing factors in the social structure. Also it possesses qualities and attributes which make it peculiarly adapted to perform the rationally harmonizing function so irrationally assumed in all earlier social organizations under the guise of Forceful and Cunning Control.

Desire to Know is as imperative in its demands as any of the self-centered motor Instincts—to live, to make, to take, to control—but it is impersonal; while it is as aggressive as other Instinctive Urges, characteristically its energies and activities are directed at Nature, not in aggression on human opponents; hence it engenders no human strife; and while it drives furiously, it drives none but its possessor—in the pursuit of Knowledge.

Desire to Know, while profoundly interested in all that pertains to Human Life and living—to eugenics and racial development—characteristically its possessor would risk his own life in the pursuit of Knowledge.

Desire to Know, though urgently interested in Nature's Laws and in all that concerns the correct making and constructing of things, characteristically lacks desire to make or construct things, but seeks only systematized concepts of Knowledge.

Desire to Know, while deeply interested in all that pertains to the desirable things of the world and to

economic affairs, characteristically lacks the thievish impulse—the Instinct to Take, to acquire physical possession: supremely acquisitive it craves only to acquire Knowledge.

Desire to Know, while surpassingly Masterful, desires no mastery of Men; it craves instead, God-like insight, pre-vision, prophecy—power in the boundless realms of Knowledge.

Leadership.

Here then is an indomitable Urge lacking all the inappropriate qualities of the strife producing Autocratic Force-and-Fear Control motor concept of Social Organization, and possessed of all the unifying qualities of Social Leadership.

A Human Society or Nation is sanely designed and rationally organized on correct principles only when it has a Purpose, and (as in the case of a well considered machine) only when full cognizance is taken of all its contributory elements, together with their essential functions and their proper co-ordination.

A National Objective.

A truly efficient National Organization would facilitate (not suppress or prohibit) the expression of all inherent Instinctive Urges, rationalizing their outflowing life energy (by sane institutional conventions) into unification in a fully predetermined National Purpose.

In a crude but clearly perceptible manner the United States, during the War, gave suggestion of such an Ideal Social Arrangement.

It had a defined and universally accepted purpose:

Its Scientific (Desire to Know) Men and its Scientific Societies were (more or less) organized into a Unifying and Advisory Board to formulate and suggest methods and means for sane living and—to accomplish the predetermined purpose of the Nation.

We have accomplished the object of the War:

We have made the World safe for Democracy.

Now, let us inaugurate a Democracy—a Democracy with an object for its existence—a Democracy with a Purpose.

By the peril to its life, the Nation has been shocked into momentary sanity. Let us while still rational, rationally take to heart the lessons which the War has taught at so staggering a cost:

First: The need of a National Purpose; a purpose based upon peace and rational Human Development; a purpose as inspiring and as unifying as War for Democracy, and as high as our highest Ideals of Life.

Second: The need of a Supreme National Council of Scientists—supreme over all other National Institutions—to advise and instruct us how best to Live, and how most efficiently to realize our Individual and our National Purpose and Ideals.

But, First and Last, a unifying National Objective.

Fernwald, Berkeley, December, 1918.

IS IT RATIONAL TO BASE HUMAN SOCIETY ON ANIMAL INSTINCTS?

Technocracy

PART II.

National Industrial Management. Practical Suggestions for National Reconstruction.

By William Henry Smyth

NOTE:—After outlining and characterizing the great economic drifts in the national developments of the past, the author declares that during the period of war the United States has developed the new form in government for which there is no precedent in human experience. He calls this "Technocracy"—the organizing, co-ordinating and directing through industrial management on a nation-wide scale of the scientific knowledge and practical skill of all the people who could contribute to the accomplishment of a great national purpose. Carry this new form of government into the days of peace and we will have industrial democracy—a new commonwealth.—Editor.

Economic Drifts.

The United States is obviously in social flux, in unstable economic equilibrium—in transition. Customs and usages which a few years ago received universal approval and legal sanction are now punished as crimes. Economic expedients which but yesterday were deemed irrational imaginations of utopian visionaries are today accomplished facts. And in every direction immemorial methods and time honored social processes have lost their sacrosanctity.

Like ocean streams enfolding in mass-flow all this whirling confusion of economic cross-currents, legal revolutions, and social agitations, there are to be observed certain super-controlling drifts.

Centralization of Government.
Concentration of Wealth.
Unification of Mechanical Industries.

Force, Wealth, Industry.

These great economic drifts indicate the mass resultant of myriad individual activities expressing that peculiarly human quality which has made man the dominating animal factor on earth—unquenchable desire to control—the Mastery Instinct. And what is more important in the present connection, these super-controlling social drifts also indicate the only directions possible for the social expression of this indomitable human urge:

Direct control of men by force and fear—exemplified in Centralization of Government; indirect control of men by controlling their products—shown in Concentration of Wealth; mutualized control (i. e., utilization) of Nature—expressed in Unification of Mechanistic Industries.

Conflicting Ideals.

In these various forms of social aggregations there are, broadly speaking, but three human types involved:

The type characterized by aggressive physical strength; the type characterized by alert mental cunning; the type characterized by purposive skill.

Of these the last—the purposive skill type—is significantly modern, brought into social prominence by that most stupendous social factor, experimental science, science which is the effective cause and basis of this era of invention—our industrial age.

A triangular conflict of ideals of life and of social purpose has thus been inaugurated; a conflict which accounts for and is expressed in our "social unrest," "conflict of capital and labor," our "social problem" and "reconstruction." The strife for supremacy of social ideal and community purpose thus indicated, is co-extensive with the human race; its most spectacular climax is the World War. And notwithstanding the many confusing forms and many-sided aspects which this world-

wide human struggle presents, it is, of course, at bottom the ages old contest of Slavery and Liberty, Bondage and Freedom.

The Golden Age?

Our answer to this old but ever new problem will determine whether our industrial age will progress to a social condition of individual freedom to which nothing in the past is comparable, or whether our time shall be, to future generations, the Golden Age!—the highwater mark of human liberty—the age of a noble but a futile fight for a great ideal—Democracy.

Club Economics.

In simple cave-man times the boss-parent, quite naturally, made and administered suitable primitive economics—with his persuasive club as a very practical emblem of authority. Under this raw-force regime the weaker "fagged" for the stronger; and the doings and havings of the "fags" made life more likeable for the forceful.

As the procreator of his subjects—and superior in strength during most of their lives—the "ownership" of them and theirs by the boss-parent was as "natural" as any other obvious fact; and chattel slavery as necessary as parent ownership is self-evident.

Mystery Economics.

Then, Miracle-Fire-Maker and Animal Breeder came along, and disturbed many of the time honored and well established customs—playing havoc generally with club-economics. By his wonder working magics cunning Miracle-worker put the fear of gods (more potent than physical strength) into the heart of simple old skull-cracker parent-god. So Miracle-worker waxed fat, and in his turn initiated and administered suitable economics—fire worship and mystery-economics, otherwise Theocracy.

With theocracy came the greatest of all social revolutions; the dethroning of brute strength and the crowning of mental alertness—Cunning. This marked an epoch in human history, in man's upward progress as a social animal. Also it marked the beginning of control of men (and their products) through man's instinctive fear of the unknown—the Rule of the Cunning.

Force-Mystery-Economics.

With varying fortunes force-economics and cunning-economics contended for supremacy till in comparatively modern times autocracy was found an effective compromise. In this most practical arrangement, the (by that time conventionalized) parent-god received his authority from the All-powerful God-of-Magic. So was initiated modernized force-mystery-economics. And the human race has as yet found no more efficient means for the control of organized society than force-mystery-economics; methods, means, and institutions which, but superficially modified since old Miracle worker's day, still function in our twentieth century (autocratic and democratic) customs, usages, conventions, and legalized economic systems.

Working-by-proxy-Economics.

In cave-man economics, the real function of the club or the purpose of Club-er was not to incapacitate Club-ee, but to induce the latter to do and supply the matters and things which otherwise would require greater and more constant expenditure of effort on the part of the economist, than the semi-occasional swing of his skull-cracker.

Old Skull-cracker's motives (though more crudely expressed) were the same as mine are, in the employment of my cook and my gardener, that is economy of effort on my part; otherwise working-by-proxy.

But the club-economic-system was essentially wasteful and inefficient; its operating expenses were outrageously high, notwithstanding the low cost of raw (human) material. Indeed, the system was apt to defeat its own ends, especially in those strenuous days, when zeal commonly outran discretion.

Doers and Suppliers.

Thus mystery-coercion represents an enormous economic advance over raw physical force. Fear of unknown but awesome consequences for failure to do and supply matters and things is fully as effective as the club—and beyond measure less wasteful of Doers and Suppliers.

So it is quite natural and inevitable that crude force methods and processes of economic control should lose favor in competition with mystery economic systems. And long race experience has proved that a judicious combination of club and mystery (otherwise force and cunning) makes for the highest degree of efficiency in a Working-by-Proxy economic system.

Proxy-Beneficiaries.

Such economic systems, however, obviously imply direct or indirect slavery—ownership of the body or control of the mind of the proxy. And for the latter the mystery method is peculiarly adapted and most satisfactory.

For self-evident reasons, control over another's mind is more effective and economical than property ownership of his body, taking into consideration the practical responsibility which the latter entails. So quite naturally, direct ownership of Proxy by the economical Worker-by-proxy gives place to customs, usages, and conventions (economics), facilitating control over the results of Proxy's activities.

Then, too, complex division of labor and specialization render chattel slavery impractical, indeed unworkable, in a society highly organized for productive industry. So an ideal working-by-proxy economic system would permit complete physical liberty to do and to make, while arranging appropriate usages, customs, and laws which automatically transfer ownership of the matters and things done and made, from the doers and makers to the proxy-beneficiaries.

Economic Science?

The difference between modern and primordial economics is not in idea or purpose, but only in added obscurity of method and in greater complexity of detail. Incidentally, also, it has become evident that "economics" is not a "science" in any proper sense, but a variable system of community usages intended to facilitate the predominating social activities. And, hence, to be workable an "economic system" must be in keeping with the activities which characterize the times.

In cave-man times, the boss-parent and his club-men had to make cave-economics. A system initiated by the "fags" would have been obviously unworkable. The priesthood had to initiate and administer theocratic economics. And so on, through the various changes in social organization: Those whose activities characterize the times must initiate and administer its economics.

Economic Experiments.

Raw force has been relegated to the economic backwoods—to the racially infantile tribes of darkest Africa, and to the social usages of our anachronistic "criminal clements," the yegg, the thug, the gun-fighter, the strong-arm gangs of the underworld of modern organized society.

Theocracy, with its crude cunning, its childish terrors and its dazzling promises of future (super-mundane) rewards, has practically vanished as a recognized dominant social factor—a fading shadow of ancient greatness.

Autocracy, that cunning combination of force and fear economics, has just now been dumped into the scrap-heap of out-worn social expedients, at the cost of the most atrocious and bloodiest of all wars, and the flower of the World's Manhood.

Plutocracy, with its autocratic capitalistic economics (while weakened and shaken by the shocks and stresses of the World War) is still a virile contestant for the throne of World Dominion.

Strength, Skill, Cunning.

Economics efficient for autocracy must necessarily differ from economics appropriate to theocracy; and these would differ from economics suitable for plutocracy; and these again would differ still more from economics appropriate to and efficient for Industrial Democracy. In brief: Force-economics, Cunning-economics, and Skill-economics must necessarily differ as widely as the essential differences between the basic qualities, Strength, Cunning, Skill.

Hence any attempt to organize or "re-construct" a social aggregation with these three basic human traits as contemporary economic bases

means simply continual social warfare; a war which, sooner or later, must be decided by victory for the Strong, the Cunning, or the Skilled—unless human ingenuity can devise a form of society which will permit and facilitate the full, unified, and socially useful expression of these three irrepressible forms of life energy.

Mechanized Industry.

Thus we return to the three great social drifts:

Centralization of Government;
Concentration of Wealth;
Unification of Mechanistic Industries.

Of the first two little need be said, for they are familiar racial experiences. But the last—the mechanizing of life—is quite otherwise; hence it is, if for no other reason, the most significant factor to be taken into account in the social problems with which we are now confronted—our problem of economic reconstruction.

And, truly, our modern mechanization of human life is a most dubious social experiment—a danger-fraught development—a dynamitic racial adventure.

Modern Science.

Back of the mechanizing of human functioning is that greatest of all modern marvels—experimental science.

Science has brought about a profound revolution in our mental attitude toward life, and in our methods of dealing with nature. It has swept into the discard practically all our previous notions regarding ourselves and our relations to the laws of nature—to Universal Reality. It has, at the same time, debased man's pride in the dust of humility, and glorified intelligence and human worth to God-like heights.

Science is, of course, the effective cause of our present mechanistic development—with all its physical benefits and all its spiritual horrors; for science knows neither morals nor ethics, and is equally potent for social "bad" as for social "good."

Science works just as effectively in criminal hands as in those of a saint. It is an impersonal, ethically neutral force and factor so potent that—even in the chaotic condition in which it now exists—it has brought about a world revolution in man's mental outlook and his physical activities, both individually and collectively. Indeed it has shown to man a new Heaven, a new Earth, and a new Hell.

Our social Heaven we have yet to construct, but the World War is sufficiently impressive proof of what social Hell can be wrought by Science in the hands of self-interest.

Past and Present.

As the result of modern science, the present time is without precedent, hence no valid analogy exists or can be imagined between an economic system appropriate to our science-taught mechanistic age and earlier economic systems suitable to conditions of life, the warp, woof, and pattern of which were Mystery, Magic, Chance.

That no helpful comparison can be made between the past and the present would be completely true, were it not that our science teachings affect but the thinnest superficial layer of our conscious thinking, while the fabric of our thought processes, our familiar customs, our current usages, our economic institutions remain practically unchanged—our racial heritage.

But, even so, the unceasing conflict of past and present, of slavery and freedom, of bondage and liberty, of error and truth, goes ever on and on—a blood soaked path; a path of misery, strife and disappointment, though hopefully ever upward toward our ideal—Industrial Democracy with personal freedom for Self-realization.

There is a serenity, a long view on the part of science, which seems to be of no age, but to carry human thought along from generation to generation, freed from the elements of passion. Every just mind must condemn those who so debase the studies of men in science as to use them against humanity and, therefore, it is part of your task and of ours to reclaim science from this disgrace, to show that she is devoted to the advancement and interest in humanity and not to its embarrassment and destruction. The spirit of science is a spirit of seeking after truth so far as the truth is ready to be applied to human circumstances.

From President Wilson's address before the Academy of Lincei in Rome.

Mental Inertia.

Without a concurrent change of economic institutions appropriate to the amazingly rapid psychical development and refinement of our modern ideals—brought about by the advent of science—the realization of these ideals will be impossible. And sorrowfully we recognize that man's instinctive resistance to change of old established modes of thought—howsoever irrational—makes progress in this direction seem almost hopeless.

Familiar Fallacies.

Most reluctantly are familiar fallacies relinquished, indeed, we hang on to them with irrational tenacity ages after their unworkable character has time and again been tragically demonstrated.

As in our bodily functions and skeletal frame there still persist the characteristics of our Saurian primordial ancestry, so ancient modes of thought live unnoted in our present day thinking processes; and our social institutions represent the seemingly outgrown superstitions constituting man's mental heredity during every past age since the infancy of the human race.

"Gott mit uns."

Medievalism characterizes our sacred and secular institutions and energizes our customary actions. Demonology is practically as prevalent as in the past; unnoted in ourselves but easily perceived in the "Gott mit uns" attitude of the Kaiser.

We pray for health, heedless of nature's laws; we pray for long life while disregarding the simple rules of right living; we beseech forgiveness of "sin" while making sin profitable by deliberate legal enactment. In a world filled to overflowing with all good and humanly desirable things to be had for the striving, we economically steal from our industrious neighbors; like paupers we beg "God" for vicariously earned joys, for unearned prosperity, and for all other forms of undeserved "good fortune;" and like pert children we urge silly advice on our man-made Providence, for the conduct of common human affairs, which we are too lazy, too stupid, too self-indulgent to bring to desired outcome by our own effort.

The God of Chance.

Important departments of life and the distribution of the products of industry—trade, speculation, opportunity, recreation—involve large elements of "luck," for by grotesquely solemn "laws" the issues are left to the "God of Chance." Just precisely as in the old days when momentous matters were settled by the entrails of sacrificial animals.

The killing of President McKinley by a madman "caused" the depreciation in the value of stocks to the extent of thousands of millions of dollars; the San Francisco calamity —which rendered half a million human beings homeless—"made" fortunes for the owners of and speculators in suburban property; the Titanic disaster threw a hundred millions of wealth (others' products) into the hands of a school-boy, and with it control over the lives of thousands of human beings; and even the supreme tragedy of a World at War is the prolific "cause" of transforming hundreds of mediocre men into multi-millionaires—and hence into powerful social factors.

Diabolism.

All this represents kindergarten thinking, primitive and childish as nursery prattle of prixies and fairies, Aladin's lamp, and all the other forms of Old World superstition and diabolism, worthy only of the infancy of the race.

Were it not that these grotesqueries characterize our "economic

and finance system" and our solemn Professors soberly teach them, they would be utterly incredible in this Age of Science and Mechanics.

But, as already indicated, our "economics and finance" are merely survivals from pre-science times; an inheritance from the days of wizardry and witchcraft, mystery and magic.

Our quaint "economics" and queer "finance" are as anachronistic, as inconsistent, and as ineffective in this Mechanical Age of Industrialism, as astrology would be in an astronomical observatory, alchemy in a chemical laboratory or "perpetual motion" in a machine shop.

Scientific Foresight.

Imagination based on science enables us to foresee the oak in the acorn—coming events latent in present happenings. But so strong is custom, so firm is the grip of the past, so compelling is the obsession of ancient superstitions, that—with all our lately acquired capability for rational scientific thinking—only the tragedy of the accomplished fact has sufficient power to jolt our sluggard wits into momentary activity.

Ten, fifteen, yes, twenty-five years ago, it required no more intelligence to foresee the present war than to anticipate a crop in the Fall from seed sown in the Spring.

Even less scientific imagination is now needed to foretell a condition of social disintegration, one more widespread and disastrous than the War, as the logical and inevitable outcome of our irrational and antiquated social conventions—our "economic and financial system."

Taking Instinct.

If taking—by force or diverting by cunning, in whole or in part—the product of another's effort, without adequate equitable return, be accepted as a valid social principle of action between individuals, it must be equally good and proper as between social groups, as between nations.

But however disguised in smooth sounding phrases—the "chances of business," the "profits of trade," the "opportunity of others' misfortune," the "prize of the victor," the "fortunes of war," the "right of might"—taking expresses the parasitic and predatory instincts. And, called by whatsoever name or howsoever disguised, taking others' makings by force, or diverting others' products by stealthy cunning, inevitably involves unending strife; strife within the group and recurring wars of nations—strife to settle the relative strength or cunning as between individuals, and wars to determine the relative might of nations.

Predatory Economics.

Our "economic system" is essentially autocratic in means, in method, in objective. Being a left-over from an Age of Predatory Autocracy, necessarily its ideals are materialistic—its motor instinct and urge impulse being self-centered "greed and grab." Naturally its means are force and cunning and its methods are ruthless, for its object is power—power, irresponsible and absolute.

Our Modern Ideals.

If we are to remain true to our ideals—ideals which the flame of war has illumined to our normally purblind spiritual insight—our course is determined. We have no choice but to choose freedom: pioneer a virgin trail, slash a course unblazed by history, uncharted in race experience—a courage testing National Adventure.

The race has never before been confronted with a situation in any way analogous to the one in which we now find ourselves, nor a problem the like of that which we are now compelled to solve; yes, and solve correctly, if we would avoid distintegration into social chaos—overwhelmed by a science-made Frankenstein.

Science Is Dynamitic!

Science has, however, put into our hands an instrumentality of such immeasurable potency, that, used with intelligent courage, we may conquer all our difficulties, surmount all our social obstructions.

But, Science left to chance, or in the hands of unintelligent self-interest, the chances are it will work untold social calamity.

There are so many roads to go wrong, and only one way to go right.

To leave a force and factor of such supreme social significance and potentiality as Science in its present condition—socially uncontrolled and unorganized for the commonweal—is more crassly unintelligent than to permit fused and capped dynamite to be scattered around promiscuously, to the chances of any carelessly or maliciously applied spark.

(A striking and significant parallelism to the thought here expressed was subsequently voiced by President Wilson in one of his speeches at the Versailles Peace Conference:

"Is it not a startling circumstance, for one thing, that the quiet studies of men in laboratories, that the thoughtful developments which have taken place in quiet lecture rooms, have now been turned to the destruction of civilization?

"The enemy whom we have just overcome had at his seats of learning some of the principal centers of scientific study and discovery, and he used them in order to make destruction sudden and complete; and only the watchful, continuous co-operation of men can see to it that science as well as armed men are kept within the harness of civilization.")

Democracy.

In the rough, Democracy is the rule of the mob, the rule of the masses, the rule of the majority—the rule of un-intelligence. But even so, it is better than any form of governmental control based upon self-interest—not excepting "Beneficent Autocracy."

Humanly bad and socially inefficient as it may be, and has been, Democracy alone encloses and fosters the living germ of freedom—self- government.

But, during the scant two years that we were at war, no ordinary or accepted definition of Democracy could make that term descriptive of the United States; indeed, under the life threatening stress of a World War, our great but chaotic nation—in self-preservation—ceased to be a Democracy!

Transformation.

In that remarkable war transformation, we certainly did not become an Autocracy; even less so a Plutocracy; and least of all a Theocracy. In fact, during this thrillingly interesting time, the United States developed into a form of "Government" for which there is no precedent in human experience.

National Industrial Management —Technocracy.

The characterizing peculiarity which rendered our great country unique—during this period of national stress—and not only unique but uniquely irresistible, was the fact that we rationally organized our National Industrial Management. We became, for the time being, a real Industrial Nation.

This we did by organizing and coordinating the Scientific Knowledge, the Technical Talent, the Practical Skill and the Man Power of the entire Community: focusing them in the National Government, and applying this Unified National Force to the accomplishment of a Unified National Purpose.

For this unique experiment in rationalized Industrial Democracy I have coined the term "Technocracy."

It was but an experiment—a forced one—to meet an exceptionally serious emergency; and like most other experimental devices, it doubtless was far from perfect in many ways and details. Still, as it seems to me, it presented an important suggestion, the germ of a novel and significant idea—a pioneer idea in the ancient art of government.

Dog-Eat-Dog.

Until appropriate economic institutions and instrumentalities are available, humanly effective Industrial Democracy must remain an unrealizable ideal, a theory unattainable as a work-a-day principle of social life, and for the efficient distribution of the products of toil, upon which human life rests.

The practical working out of our present efforts in this direction, has so

far only resulted in a frenzied scramble for wealth, place, power—a brutish-instinct-scramble, in which greed, cunning, and lust for human mastery are the urges; "dog-eat-dog" the "practical" ideal; and mystery, m e d i e v a l i s m, law-loaded-dice and chuck-a-luck instrumentalities the controlling factors.

The Greedless Scientist.

In this weird social (?) conglomeration how incongruous seems—and, indeed, is—the greedless scientist, who seeks but to learn, to comprehend, and to co-ordinate the laws of nature; and who cares naught for human mastery. In this frenzied scramble for science-created wealth what earthly chance has its real creator—the scientist?

Practically none!

None, unless he sells himself into virtual slavery; unless he debauches his truth-seeking to the interest of those who—more "practical"—devote their energy and cunning to the "practical" enterprise of gaining power by securing control of wealth. And yet, the United States is characteristically a nation of technologists—scientists, inventors, workers in and utilizers of the raw materials and the forces of nature. Not only are we instinctively mechanistic, but we are—by heritage, by force of circumstance, and by tradition—born lovers of personal freedom. Freedom is our ideal—self-government.

Prior to the War, our de-humanizing ideal was Mechanistic Efficiency, under its soul-searching stress was born a Humanly Effective Nation.

Our Costly Lesson.

With all these considerations before us, and our fleeting glance at the possibilities of socially unified skill, technology, and science, how worse than foolish to revert to our pre-War "dog-eat-dog" practices and practical (?) ideals.

Instead of so doing, would it not be well to take to heart the lessons forced upon us at so stupendous a cost of life and human misery?

Would it not be wise statesmanship to experiment further on the lines of direction into which we were forced by the compulsions and stresses of War?

Reconstruction—With a National Objective.

The War is over—won!

We are now facing the—in reality—more stupendous problems of social reconstruction.

For the War, we enlisted, conscripted, commandeered all our men who by natural aptitude, and by personal inclination, were adapted to the requirements of war. We organized and co-ordinated them for the intended purpose; we trained and exercised their bodies and their minds to meet known and unknown trials; we energized their loyalty to the Flag—the Commonweal; we stirred their personal devotion to the Nation's ideals; we enthused their wills to the accomplishment of the unified Will of the Nation—the National Objective.

Rationalized Industrial Democracy.

No need is there to speak of the result of this Unification of National Spirit and National Purpose—the War is over; won!—gloriously won!

As we enlisted all those peculiarly adapted to the destructive functions of War, let us now systematically unify those peculiarly adapted to the constructive functions of Peace—our scientists, our technologists, our inventors, indeed, all who by natural aptitude and personal inclination are specially fitted to deal with the social and constructive problems of peaceful industry; nationally unify them and their accomplishments for the Commonweal.

Let us organize our scientists, our technologists, our exceptionally skilled; let us commandeer, conscript, enlist, their loyalty, their devotion, their enthusiasm, their intelligence, their interest, their talents, their accomplishments for the purposes of Peace and the realization of a Noble National Purpose.

Let us rationalize our Industrial Democracy!

Public Service First.

We are up against the problem of national reconstruction; let us not tinker with futile details—let us nationally Re-construct.

Such a national co-ordination of Science and Technology, as is here suggested, would produce and constitute a living and Social life-giving National Reservoir of Science—practical and theoretical; a Technical Army devoted to Peace and Construction.

It would constitute a National Army, from which alone Private Interests could draw their needed scientific and technical personnel; personnel whose loyalty is primarily to the Commonweal—the Nation; the Nation of which they are honored Public Servants.

This is the exact reverse of our present unpatriotic, un-democratic order and organization. Yet, such an intimate, but subsidiary, relation to public service, as is suggested, would liberate not hamper individual energy and freedom of private enterprise, for it would permit the free expression of self-interest unified in the commonweal. Also it would, without conflict, facilitate the full and socially useful outflow of the three vigorous forms of life energy—Strength, Skill, Cunning.

Industrial Apex.

From this co-ordinated Army of Science, Technology, and Skill should be selected (by a process of realized capability and recognized social worth) a representative and comprehensive National Council of Scientists as Managing Directors—our Supreme Social Institution.

Fernwald, Berkeley, January, 1919.

This National Council should be the apex of the Nation's Industrial Management. It should constitute the Leadership of our thus rationalized Industrial Democracy.

Purpose.

But this reconstruction — revolutionary as it doubtless will appear to many—is only preparation for our National Task.

It would, indeed, make of us an organized human aggregation—a unified social machine, capable of intelligent self-conscious national life; and then comes the question:

For what worthy purpose have we constructed this huge highly organized Human Instrumentality?

This problem a Nation—no less than an individual—unescapably faces, the instant it has become really self-determining.

It is the Nation's first, its final, its only problem—the final problem of human existence.

And this all-important matter, every Nation (like every individual) must settle for itself—settle between itself and Universal Rationality: The object of the Nation's being; its conscious rational purpose—its National Objective.

SHOULD THE DESTINY OF THE NATION BE LEFT TO CHANCE?

Technocracy

PART III.

Ways and Means To Gain Industrial Democracy.

By William Henry Smyth

NOTE:—In the two preceding essays Mr. Smyth forecasts a new form of government that he calls "Technocracy"—National Industrial Management. This article discusses ways and means to develop, guide and direct purposive industrial democracy and so usher in a new commonwealth.

The author suggests three practical thoughts for economic reconstruction: That permitting chance to influence our lives and conditions means ignorance. That the flow of time is not reversible—the future cannot help the present. That cause and effect, not whim, is the law in nature's processes.—Editor.

Social Structures.

Democracy and Autocracy are the antitheses of social organization and express opposite underlying principles of human interaction.

The structural details of any human contrivance—whether Mechanical or Sociological—must be in keeping with its underlying idea. Change in principle necessarily entails functional reorganization—reconstruction.

Hence, ways and means that have proved effective for autocracy, or that long usage has shaped to facilitate its aims and outcomes, must needs be not only unworkable in, but subversive of, democracy. So it will be helpful in our quest to keep constantly and clearly in mind the differences between these mutually exclusive notions of Government.

Autocracy.

Probably the most radical difference between these two forms of social structures is the assumed sources from which each gets its authority.

Autocracy derives its powers from "God." This assumption pre-supposes inherent social distinctions between individuals — occult privileges conferred upon some to control the acts of others. But effectively to control acts makes requisite control of thoughts, for consecutive thought necessarily precedes purposive action.

Thus Autocracy implies a "God-given" right of censorship over other men's physical and mental functioning. Hence, it also pre-supposes the non-neutrality of Nature — cosmic-favoritism; for clearly nature's "God" could not look with favor upon disobedience or lack of submission to the mandates of His authorized agents.

A social organization framed upon this general idea implies constructive details, i. e., customs, laws, institutions —economics—comprising:

1. A Supreme Control element, deriving its authority from and responsible only to a super-mundane source.
2. Social instrumentalities to enforce obedience—physically coerce human actions, and super-naturally control men's thoughts.
3. A descending series of conferred authority starting with the "God-appointed Ruler" and ending with the popular "masses" void of rights.

Thus the measure of efficiency in this social system is the absoluteness of control — completeness of enforced obedience in act and subservience in thought to the "God-inspired will" of the Autocrat and his Agents.

Democracy.

Democracy derives its authority from Man. This pre-supposes general intelligence sufficient at least for self-conscious Individual wants and Mass purposes, with freedom for their pursuit; thus it assumes super-mundane non-interference with human wants and purposes, and a rational Cosmic Order corresponding or co-ordinated to human intelligence in suchwise as to be knowable and responsive thereto.

A social system based upon this general idea implies constructive details in consonance with:

1. The neutrality of nature.
2. Inherent individual rights flowing from the facts of rational human existence.
3. Equality of individual rights.

Thus the measure of efficiency in a Democracy is to be gaged by the completeness of individual freedom of thought and liberty of action in relation to each other and of access to nature's stores, resources and forces—freedom and liberty being based upon rationality as determined by workability in the production of general human happiness, prosperity and opportunity for self-development.

Autocracy is based upon the idea of the essential manship (i. e. manlikeness) of "God" and the inherent unrighteousness—irrationality—of Man.

Democracy is based upon the idea of the essential God-ship (i. e. God-likeness) of Man and the inherent righteousness—rationality—of the Universe.

Thus we get a clear concept of our chosen social Ideal, and from it indications as to the character of means appropriate to or discordant therewith. In other words we have on broad lines, bases for rational economic conventions, adapted to make effective a social system on the basic principles of Democracy.

Limitations.

Neither by mutual agreement, nor by legal enactment, nor constitutional provision, nor even as a concession to ancient custom and universal consent may we make two units and two units constitute five units—being contrary to the facts of nature. For precisely the same reasons we cannot (by any or all of these social expedients) successfully adopt or retain economic devices at variance with the essential principles of Democracy.

Industrial Democracy—Purpose.

Autocracy and Democracy are both merely forms of human organization, group contrivances—social machines—built on different basic ideas or principles; machines to accomplish something.

A Nation (no less than an individual) that would build (or "reconstruct") without first clearly determining the purpose of the proposed structure, would be indulging in a foolish and futile waste of energy. But what our national purpose is, is quite apart from the present inquiry. And, indeed, it is not the province of an individual, but of consensus to determine the ultimate National Objective.

Industrial Democracy.

The people of the United States have, however, agreed and decided upon the idea of the National Organization and its proximate character — Industrial Democracy. Or perhaps this outcome represents the resultant of choice and circumstance. Be that as it may, we are now consciously launched on a career of mechanistic Industrial Democracy; and the aim of the present inquiry is to investigate the functional consistency (appropriateness) of the working parts to the accepted principle of the National Social Machine.

Neutral Nature.

The greatest and most consequence-breeding thought that has ever found lodgement in the human mind is the idea that: Nature is neutral toward Man and in regard to all Human concerns.

The greatest and most consequential human discovery is: The Orderliness—rationality—of Nature.

These two concepts are the marvelously fruitful germs from which all modern Science has developed. And, as exact science—based upon experimental proof—owes its continued development to machines of precision; it may with ultimate significance be said that our idea and Ideal of Human Liberty, self-government, as we today conceive it, is one of the many wonderful products of the machine shop—our Mechanistic Industrialism.

Motor Impulse of Autocracy.

Man's soul is free, hence Rational Liberty is his social motor impulse.

Clearly, with an anthropomorphic "God" interested in human wants, wishes, purposes, and projects, and

with unlimited power and inclination to meddle in human concerns, to help or hinder, to make or mar them; human "freedom of thought" would be futile, and human "liberty of action" a farce.

We have seen that the motor impulse of Autocracy is super-mundane in origin; its initiative is superhuman; its means are mysterious occult powers derived from "above"; that privilege maintained by ruthless force and cunning is an essential element; and power absolute and humanly irresponsible is its objective.

These factors therefore present some criteria wherewith to gauge the validity of present economic conventions; also to test their appropriateness in a Democracy, the basis of which is human experience energized by individual human initiative; likewise to measure their probable worth in a society in which the powers to do, and the opportunity to be, are derived from the consensus of free and equal human wills; wills subject to none, but co-operating to facilitate individual and mutual purposes—purposes socially unified in the purposive National Will.

Nature Non-Ethical.

In the light of Modern Science, human experience shows that Nature's dealings with Man carry no more moral or ethical significance than in the problems of Practical Mechanics. Scientifically enlightened experience teaches that Humanity alone is ethical or takes account of motives:

Impartially the sun warms and scorches, blesses or blasts; brings famine and plenty, life and death. The sea, the wind, earthquake and torrent, and all the forces of Nature build and destroy, with utter disregard to Man or his handiworks, his hopes or his faiths, his motives or his morals. The wondrous mechanism of Creative Evolution performs its myriad functions no less oblivious to Man's existence than are the ponderous machines of Man's own devising. Nature, like them, fosters or overwhelms with heedless indifference; ruthless, pitiless, appalling to ignorance, error, and fear; but helpful, indulgent, obedient to knowledge, intelligence and courage; neither kind nor cruel, nor good, nor bad—impersonal.

Failure.

In the past, with childlike faith we have relied for support and guidance in human affairs upon the assumed beneficence of occult Powers. Upon this basis, Autocracy is the only conceivable form of social organization.

Yet, the autocratic idea and Ideal has proven, (in the opinion of many), to be a disastrous failure under modern conditions; and we in the United States have decided to try its antithesis—Democracy.

But while discarding the old for the new Ideal, we have, most illogically, retained—substantially unchanged—the effective conventions, the ways and means, of the old order.

And now, with modern Science and Mechanics—hindered and hampered at all points by our futile and inappropriate "Economic System"—we are fighting for National life and Democracy against efficiently organized Autocracy. Not alone the Autocracy of organized military force but also the Autocracy of systematized and unified financial Cunning.

Thus the urgent need for scientific reconstruction of our whole social system is multiplied manyfold, if we are to rectify our past sins against reason and retrieve our pitiful social failure.

Modern Dependence on Machinery.

The life of the ordinary modern man differs from that of all previous times in his peculiar dependence upon complicated machinery — machinery over which he exercises no personal control. The manifold activities which in past times depended upon individual muscular effort are now performed by prime movers and power driven machines, so that the individual man's work and effort is unmeaning and useless apart from these instrumentalities of life and production.

Thus the United States is one huge mechanistic industrial workshop..

The organization of these complex, specialized, power-driven mechanisms and the sources of power and of the raw materials with and upon which they operate, together with the distribution of the output, are the functions of Scientific and Technical Industrial Management.

There should be, it would seem, no room or occasion in such an arrangement, for chance, mystery or magic.

Old Customs.

That the average individual prefers old customs to new, helps to account for much that is strange in present conditions; but it fails to explain completely how it happens that occultism has been wholly banished from the Machine Shop—the Social Producing Element—and remains so conspicuously interwoven in our "Economics"—the Social Distributive Element.

It would seem that we are compelled to assume that our deep seated human instinct of self-interest is the controlling factor in maintaining this incongruous combination of Science and Occultism.

It would seem that the cunning acquisitive instinct of certain exceptionally alert minded men in the community—taking advantage of the normal preference of the average man for old ways and customs, and his preoccupation in his favorite workings and doings—is employing these ancient and familiar usages to befog and obscure the stealthy diversion of an undue proportion of the Community Product.

If this be so, it should be interesting to glance at the ways and means, the prestidigitatorial bag-o-tricks by which it is accomplished. Later we will scrutinize them more closely and in greater detail.

Money and Credit.

The bases of Mechanics in all its simple and complex expressions are two commonplace elements — the Wedge and the Lever; the bases of our Economic and Financial System in all its curious manifestations are also two commonplace elements—"Money" and "Credit."

Here the similarity ends.

There is not on ordinary fourteen-year-old school boy in the United States but who knows and intelligently uses the wedge and lever; and there does not exist a Mechanical Expert who could reasonably question the practical accuracy of the boy's knowledge regarding these elements of mechanics.

Under our present economic usages, customs and laws, each one of us—man, woman and child—is compelled, willy-nilly, to use daily and hourly some form of "money" and "credit"; and there is not in the world a man who understands either of these economic elements, as the boy knows the wedge and lever. Nor is there an Economic Specialist or Financial Expert whose attempted explanation of either "money" or "credit" (or the functions of either) whose supposed elucidation would not be ridiculed and controverted by a multitude of Economic and Monetary Experts of equal or greater authority.

The average man of affairs—Lawyer, Doctor, Editor, Tradesman, Merchant or Mechanic—freely admits his incapacity to understand the "mysteries of finance," and frankly says: "I don't know a damn thing about it." Even Bankers and Brokers, Financiers and Economists, whose business it is to deal in and manipulate these most remarkable commodities, will quite frequently make the same honest confession of ignorance. Indeed, the subject is common stock in the jokesmith's workshop.

Mystery, Magic—Failure.

In no other department of human interest is so much mystery, confusion and controversy regarding the basic "facts" and assumptions, except possibly institutional religion—which, avowedly, rests upon the miraculous and supernatural. Indeed, the parallelism between these two ancient activities is curiously complete. Both transcend human experience, and neither submits to the tests of Science—weighing, measuring, cause-and-effect experimental proof.

"Credit."

Like our religious forms, our Economic System is hoary with age—a survival from ancient Babylonian cus-

toms. It rests on assumptions unsanctioned by science; its effects are causeless; the miraculous supersedes natural causation; mystery takes the place of human reason; and endless futurity is its heavenly storehouse of all humanly desirable things.

A Thievish Process.

From this miraculous store the "Wizard of Finance," with his wonder-working wand—"Credit"—filches back (for a slight present tangible consideration and without the owners' consent) the imagined products of imagined future toil of unborn generations of workers—a doubly thievish process, as black in morals as in magic.

"Money"

While supposedly representing lifeless things (that wear out by use), "money" is conventionally endowed (by financial magic) with everlasting life, and also with life's unique function — reproduction. So "Money makes money" for ever and ever—for the Magician.

Peace, super-abundance, and endless idleness—"retirement from business"—is "the Promised Land, flowing with milk and honey" of Economic Saint-hood—the earthly Heaven of "Finance."

But . . ! Never was work more urgent nor idleness less common; never was peace more scarce nor strife so universal; the labor of future generations has been crazily "mortgaged" by thievish "economic" (!) conventions beyond all possibility of redemption (in spite of the fact that science and mechanics have multiplied manifold the effectiveness and productiveness of present labor); and Man's present vocation is social suicide—the destruction of wealth and the slaughter of his fellow men!

A stupendous and tragic record of "Economic" folly and failure!.

The Mechanic's Philosophy—Success.

The "God" of our nursery tradition has been banished from the Machine Shop and the world of Mechanics. The result of this courageous spiritual Declaration of Independence has been our "Conquest of Nature," our Age of Productive Industry.

Seemingly a like rending of thought shackles, a similar breaking of mental prison bars, is needed in the realm of Economics.

When scientific imagination and knowledge of Nature's Laws are substituted in our economics for chance, mystery, and magic; when the regulation of our Nation-wide industry is taken out of the hands of quibbling "lawyers", and nature's forces, resources, and the mechanical instrumentalities for their transformation into human necessaries and desirables are no longer the play-things of money-juggling gamblers, and the products of Nature and Mechanic Arts no longer glut the instinctive craving of Acquisitive Cunning; when this economic childish irrationality is sanely substituted by organized Science, Technology, and specialized Skill co-ordinated in National Industrial Management, then will begin real civilization, the Age of Social Sanity, —Technocracy.

"Chance" Catastrophes.

The "God of Chance" or "God's mysterious providence"—which permits the killing of a President by a madman; the obliteration of a great city by fire; the sinking of a huge passenger-ship in mid-ocean; and a world-war—are merely misleading euphemisms for human ignorance, human improvidence, and childish shirking of responsibility.

Social conventions—our Economic and Financial system—which by "money magic" make these "chance" catastrophes into controlling factors in the distribution of the product of human effort, are simply tragic monuments to ignorant superstition, mental laziness, and criminal folly.

Indeed, our whole "Economic System" is so incredibly unscientific, so irrational, so utterly puerile, that, were it not for custom-induced mental myopia, its glaring absurdities would long ago have sufficed—without a world-war—to shock our moral sense and intelligence into effectivity.

"Chance" in Economics.

A machine is certain in action and uniform in output, because scientific imagination has foreseen, and constructive intelligence has provided for, the elimination of the "chance" element.

The forces which will devastate the results of man's industry, through the "natural" action of an uncontrolled torrential stream, (with equal unconcern) if scientifically directed, will make the same country-side teem with human happiness—but, not by "chance." In like manner, the same "natural" social forces which make poverty, wretchedness, and vice, will (with equal unconcern) produce the opposite results—but never by "chance."

Human institutions founded upon "chance" merely express Man's brute-unintelligence. That our "Economic System" makes "chance" a controlling factor for the distribution of wealth, merely shows the persistence of ignorance and that old habits of thought are more compelling than modern intelligence. To legalize "chance" deliberately is to relinquish our Godlike control over the results of Nature's processes, and thus voluntarily enslave ourselves to ruthless Nature, and to abandon even our authority over the outcomes of our own actions. Hence, it would seem, that the first step toward a new and Rational Economics is a courageous declaration of our freedom from tyranny of the insensate "God of Chance."

Choice.

When a Mechanic has decided upon an idea or principle as the basis of a proposed machine, he has exercised his rational freedom of choice. Regardless of whether his choice is wise or not (in this decision) he has placed definite limits upon the range of subsequent selection in regard to detail instrumentalities. Indeed, he has entered into an implied contract—assumed a rational responsibility—to employ only such means in the construction of his machine as (in accord with Universal Order) are appropriate to make effective his proposed mechanical contrivance; with failure as the penalty for wilful or ignorant error—breach of his implied contract.

History demonstrates conclusively that races, nations, civilizations (equally with individuals), are subject to the same rational limitations, are bound by the same responsibility, and incur the same penalty for wilful or ignorant error in exercising their human freedom of choice.

Out Last Warning!

The practical difficulties of forestalling the hazards of birth, of death, and of disaster, are doubtless great, and the problem of eliminating the "chance" element from our economic system is a man-sized job—with a slim probability of complete success. But, it is reasonably certain, that, if courage to make the needed change is lacking, or if our intelligence is insufficient for the task, our social adventure in Democracy will prove a tragedy. And the world war is, I believe, our last warning.

Laisser Faire.

Nor may we drift; laisser faire is lazy fear—cowardly re-submission to the dog-cat-dog jungle law, right-of might principle of Nature—and of Autocracy—from which our modern conscience has revolted.

The Mechanic.

While caution bids us pause and realize that Nature is ruthless in its punishment of ignorance and error, courage reminds us that Nature also is infinitely lavish in its rewards for knowledge and intelligence; and courage points to the Practical Mechanic as an exemplar and an object-lesson for the Social Constructor.

Mechanic vs. Nature

The Mechanic has courageously invaded Nature's guarded realm; has accepted her "no quarter" terms; and has assumed complete responsibility for his revolt against all the ancient Occult Powers.

He has tacitly assumed that "God" and "Nature" are supremely and preeminently self-sufficing; that these all-inclusive profundities utterly transcend the utmost limits of his acts or his art—that the "plans of God" and the Mechanic's problems cannot in anywise conflict.

He predicates that "God" and "Nature" are limitlessly competent to care for their own infinite concerns; hence,

that his problems involve only what the Mechanic wants, and not "the wants of God." In so far as concerns his art (and with reverence for Universal Order, which makes his art possible) the Mechanic, in effect, says: "This I will," "Thus I do." "I am the Earth-god of things, of matter, and of motion."

The Mechanic's Achievements

And how gloriously has the Mechanic made good!

Even the most most cursory survey of his accomplishments, in manufacture, in transportation, in communication, in reclamation, in power utilization generally, staggers while it exalts the mind.

Has he not with wheat and corn from Eastern steppe and Western prairie, and with fresh and wholesome meat from the Antipodes, fed the hungry workers of Europe; and brought from the four corners of the Earth materials for their needs, their uses, and their industries? Yes! And from the teeming estuaries of the North he has served the World's table with dainty fish, and with wine and oil and luscious fruit from the fertile valleys of the Pacific Slope.

By his use of Nature's forces, he has immeasurably out-rivalled imagination's Magic Carpet, transporting by his mechanisms untold millions of work-weary families from cramped and life-worn areas to the free spaciousness of many wide scattered Edens of plenty, there to found Empires.

And more, he has bound these broadcast settlements in bonds of mutual help with space-negating bands of steel and steam; and on the one-time pathless ocean he has marked out highways with light and life of swift-moving commerce, till, in the uttermost ends of the earth, friend greets friend as though but a mile from home. Seas no longer separate, nor continents divide, for Man now talks with Man as face to face across the soundless void.

As with a broom, he has swept sullen ocean back to its deeps and bared Netherland's fertile plains; and with dyke, and mill, and pump he holds his prize secure from angry wave and wind and shifting sand. A prize indeed!—a rich and prosperous country of towns and villages, of farms and homesteads, all interlaced with road and rail and placid water-way; a hive of human industry — a kingdom snatched from ocean's grasp.

In torrid Egypt, too, he has tamed the turgid Nile to flood the desert sands and made thereof a nation's granary.

He has moved mountains, split continents, harnessed Niagaras to his machines; subdued the land, triumphed over the sea, and now seeks dominion of the air.

And, East and West and North and South he has sluiced and swept with giant streams the high-piled gravels, and ript and smashed and ground to powder, fine as from the mills of the gods, mountains of crystalline quartz; and dredged, and plowed, and sifted the frozen Arctic tundra, to tear from reluctant Earth its golden treasure for counters wherewith to play Man's world-wide commerce game.

The Economist's Failure.

All this stupendous output of human experience, human reason, human industry—rivalling creation itself —is in startling contrast with our world-wide tragedy, the outcome of our world-wide economics. A contrast doubly significant; significant in the entire absence of chance, of mystery, of magic from the work of the mechanic; and again as expressing the practical extremes of glorious success and of failure most tragic.

Selective Rejection.

The human mind, like the body, can advance only step by step, from the solid ground of the known and tested to the doubtful footing of the unfamiliar. Human progress is like adventuring through a morass of ignorance toward a far-distant goal; with disaster the penalty for every false step.

In the great adventure called "Human Progress" the "Occult" has proved a will-o-the-wisp guide.

Notwithstanding all the stupendous accomplishments which characterize productive industry and the present era as the Age of Mechanics, the process which has brought it all about, is the same step-by-step—

proof by experiment — scientific method. We can think of the new and unknown only in terms of the old and familiar.

Still errors detected and fallacies perceived are guides for inventive synthesis—construction.

Selection is but a process of inverted rejection. So having determined that our ideal social structure is the antithesis of the Autocratic idea, we may with confidence assume that the characteristic elements of Autocracy are inappropriate for our purpose. Thus by a process of (selective) rejection we should arrive at economic expedients more in harmony with our Social Ideal.

Democracy vs. Anarchy.

Universal Order is the key-note of modern Science; and upon this orderliness of Nature scientific thinking is based. Hence, the much abused phrases "human liberty" and "human freedom" cannot imply anarchy or chaos, i. e. dis-order.

Liberty means absence of irrational restraint.

Freedom of thought can have but self-imposed limitations.

Social Freedom simply means liberty for rational individual activity tending to the accomplishment of Community Purpose.

National Self-determination.

When a Nation—exercising its freedom of choice—discards Autocracy and selects Democracy as its social principle it cannot sucessfully retain the working elements of the discarded social organization. If it is to survive, it must adopt ways and means and methods of life in consonance with its chosen principle.

Our Futile Experiment.

The United States, like a novice in Mechanics, has seemingly undertaken the futile experiment of building an Industrial Democracy out of the functional elements of Predatory Autocracy. The natural result is noise, friction and heat. And worse —a dangerously large proportion of our energy is wastefully expended in constant readjustment to keep the outfit running, and to prevent its pounding itself into scrap. Practically the whole of our "Economic and Financial System" is a left-over from the days when absolutism and privilege were universally accepted ideas and ideals; and when magic-causation was an unquestioned "fact." Quite naturally our economic customs, conventions and laws are in keeping with these antiquated assumptions. Substantially our "Economics" is a vestige, and as with other vestiges—like our vermiform appendix—it is now functionally useless, and frequently causes much unnecessary pain and trouble; which sooner or later may end in tragedy.

Not All Bad.

While, in the foregoing, there is no real cause for pessimism, there is even less reason for happy-go-lucky optimism.

Mentally reviewing this matter, there appear several implications which stand out clearly as definite practical suggestions for economic reconstruction.

Suggestions for Reconstruction.

First: That "chance" means ignorance.

The elimination of even the crudely obvious "chance" factors from our laws, customs and economic conventions, would do away with much rank injustice in our social functioning.

Second: That the onward flow of time is not reversible—the future cannot help the present.

A clear appreciation and practical application of this seemingly axiomatic proposition would go far to remedy the grosser evils of capitalistic economics, and strip "money" and "credit" of their conventionally endowed time-reversing magic.

In every physical human accomplishment, there are involved but three factors or elements: raw Material (Nature's free gift); human Time; human Energy. Every product (food, clothing, housing, transportation facilities, or what not), represents a definite amount of past human time and past human energy—gone beyond recall. Neither by ghostly hands nor by flibber-gib financial conventions can future work or future product be yanked back into the present, to be used for present purposes, or to meet

present emergencies—even if self-respect and common honesty did not suffice to prevent such inexcusable camouflaged robbery of the helpless, the quintessence of "taxation without representation."

Third: That cause-and-effect, not whim, is the order of Nature's processes.

Science shows us that, so far as Man is concerned, Nature is infinite potentialities; potentialities realizable in terms of individual and collective purposes. We can if we will—providing our aims and objectives are in accord with the Rational Order of Nature.

It is only in purposive action that human freedom—self-determination—is expressed.

An aimless man or a purposeless "nation" is an equally insignificant fragment of raw material in Nature's Evolutionary and Devolutionary processes. But, knowledge of Nature and of Nature's Laws co-ordinated by Human Intelligence in rationally purposive actions, have all of Nature's infinite potentialities and stupendous forces as tools to facilitate accomplishment.

Purposive Co-ordination.

Obviously the control of our Great National Workshop—the United States—should not be in the hands of selfish Mr. Acquisitive Cunning—"who knows the price of everything and the value of nothing"—facile only in getting something for nothing—and whose highest social ideal is: "To buy cheap and sell dear"; but—in reason, in common horse sense!—our purposive Industrial Democracy should be guided and directed by nationally organized and co-ordinated specialists in all the branches of Skill, Technology, and Science which are involved in its Social Life and requisite to the successful accomplishment of its Great National Objective.

Fernwald, Berkeley, February, 1919.

IS THE ONWARD FLOW OF TIME REVERSIBLE BY HUMAN CONVENTION?

Technocracy

PART IV.

Skill Economics for Industrial Democracy.

By William Henry Smyth

Note—In the previous essays of this series the author shows that men's characterizing activities express certain instincts or instinctive urges and that human societies (nations) today consist of uncoordinated groups, each bent upon gratifying its predominating instinctive urge—at the expense of other groups and regardless of the common weal. He proposes as a remedy for this social strife a plan of National Co-ordination—Technocracy.

This article discusses some of the important phases more in detail, with constructive suggestions for the elimination of "chance," "mystery," and "magic" from our present economic processes, the substitution of intelligent purposive ways and means for haphazard methods; and for self-interested autocratic control, the substitution of Scientific Leadership organized for the accomplishment of consensus National Objectives.—Editor

Our Nationwide Machine Shop.

Attempting to make a robust man conform to nursery usages and swaddling clothes conventions would be no more absurd than our present efforts to conduct Twentieth Century life on the Hunter and Sheepherder customs of our racial infancy.

Indeed, it would be less preposterous than our continued efforts (despite tragic experience) to have lawyers and gamblers run our nationwide Machine Shop by methods and under conventions not differing essentially from ancient Babylonish laws of King Hamurabi and economic customs in vogue two thousand years before Christ.

Childish Economics.

Human society started with Brute-force Economics, suitable to Caveman—Hunter and Fighter—times. Then humanity advanced through the Pastoral—animal breeder—stage, being therein confronted, socially and economically, with the awe-inspiring marvel of phallic phenomena, the fearful mystery of Death and the joy-inciting miracle of Life—life with its seemingly endless sequence of production and reproduction.

The Animal Breeder stage of development, indeed, seems to have left an indelible impression; seems to have peculiarly influenced man's mental outlook and modified his thinking processes so profoundly as to have shaped even our modern business conventions and daily practices—or at least to have provided favorable psychic habitat for our conventional economic irrationalities.

Mysticism and Symbolism.

The mind-staggering miracle of generation seems to have thrown primitive human thinking back upon itself in dazed befogment—bewilderment and misunderstanding of Nature's laws, out of which confusion of thought emerged Mysticism with its magic symbolism.

This mental chaos of mystic symbolism—the endowment of the symbol (or "representative") with the qualities and functions of the thing symbolized—is a primordial explanatory perversion which still characterizes our commonplace thinking on monetary matters. The "power of money" is proverbial among us; and that "money makes money" is axiomatic to the average man; also that "money makes the mare go," and that it performs many other strenuously animistic stunts.

Money, Mortgages and Nehemiah.

Down through the ages occasionally we find (both in ecclesiastic and lay writings) clearly reasoned reprobation of practices based upon this naive misinterpretation of the facts of Nature.

"The words of Nehemiah, the son of Haealiah" and cup bearer of Artaxerxes, king of Persia, are as "modern" today as on the day they were uttered—nearly five hundred years before Christ.

And they are as applicable to the "civilized" world today as they were to the kindergarten usages and antisocial practices of our civilization's nursery—Mesopotamia.

"Some also there were that said, We are mortgaging our fields and our vineyards, and our houses: let us get corn, because of the dearth. There were some also that said, We have borrowed money for the king's tribute upon our fields and our vineyards. Yet now our flesh is as the flesh of our brethren, our children as their children: and lo, we bring into bondage our sons and our daughters to be servants, and some of our daughters are brought into bondage already: neither is it in our power to help it; for other men have our fields and our vineyards.

"And I was very angry when I heard their cry and these words.

"Then I consulted with myself, and contended with the nobles and the rulers, (or deputies) and said unto them, Ye exact usury, every one of his brother. And I held a great assembly against them.

"And I said unto them, We after our ability have redeemed our brethren the Jews, which were sold urto the heathen; and would ye even sell your brethren? and should they be sold unto us?

"Then held they their peace, and found never a word.

"Also I said, The thing that ye do is not good:

"And I likewise, my brethren and my servants, do lend them money and corn on usury. I pray you let us leave off this usury.

"Restore, I pray you, to them, even this day, their fields, their vineyards, their olive yards, and their houses, also the hundredth part of the money, and of the corn, the wine, and the oil, that ye exact of them.

"Then said they, We will restore them, and require nothing of them; so will we do, even as thou sayest.

"Then I called the priests, and took an oath of them, that they should do according to this promise.

Also I shook out my lap, and said, So God shake out every man from his house, and from his labor, that performeth not this promise; even thus be he shaken out, and emptied.

"And all the congregation said, Amen, and praised the Lord.

"And the people did according to this promise." (Nehemiah Chap. 5.)

Money, Reason and Rome.

Practical minded ancient Rome, from whom we have learned so much of our work-a-day jurisprudence—while retaining many other gross superstitions—seems to have rejected this animistic pecuniary absurdity, as is shown by the familiar expression: Money does not procreate money—"Nummus nummum non parit."

Money, Sheep and Shylock.

The genius of Shakespeare realized the fatuity of this pastoral-age-founded pecuniary delusion that "money breeds money" (which still obsesses our misbegotten finance conventions), and holds it up to deserved ridicule:

(The Merchant of Venice—Act 1 Scene 3.)

Shylock:

When Jacob grazed his uncle Laban's sheep—

Antonio:

And what of him? Did he take interest?

Shylock:

No, not take interest, not, as you would say,
Directly interest: mark what Jacob did.
When Laban and himself were compromised
That all the eanlings which were streaked and pied
Should fall as Jacob's hire, the ewes, being rank,
In the end of autumn turned to the rams,
And, when the work of generation was
Between these woolly breeders in the act,
The skilful shepherd peel'd me certain wands
And, in the doing of the deed of kind,
He stuck them up before the fulsome ewes,
Who then conceiving did in eaning time

Fall parti-colored lambs, and those were Jacob's.
This was a way to thrive, and he was blessed:
And thrift is blessing, if men steal it not.

Antonio:

This was a venture, sir, that Jacob served for;
A thing not in his power to bring to pass,
But sway'd and fashion'd by the hand of heaven.
Was this inserted to make interest good?
Or is your gold and silver ewes and rams?

Shylock:

I cannot tell; I make it breed as fast:

Adolescent Economics.

Magic-Mystery tinged Breeder-economics and vocational experience (misinterpreted) quite naturally resulted in Theocracy and Theocratic-economics; and from Theocracy the course is straight, the steps easy and obvious to Working-by-proxy social systems — Privilege-economics — as represented by Autocracy, Aristocracy, and modern Plutocracy.

Thus the race has successively adopted Strength-economies, Cunning-economies, and Cunning-Strong-economics; each system appropriate to the conditions of life and stage of development, in the past.

Adult Economics.

Today is the day of Doer, Worker, Maker—praetical utilizer of Nature by skill of hand and seience-taught brain—the Mechanic.

This is an age of applied Science—the utilization of Nature's Laws and forces — consequently the earlier mystic, predatory, and parasitic economic usages and conventions are now antiquated and impraetieable. Hence they are beginning to revolt our science-developed practical common sense, our sense of propriety, and our modern sense of justice.

Furthermore, it is significantly in accord with race experience, with commonsense and with reason that:

Those whose activities characterize the times, must initiate and administer its economics.

So if our Mechanistic Age, our Democratic Dispensation is not to prove a futile race experiment, a will-o-the-wisp ideal, we must initiate Skill-economics, economics of our Twentieth Century mechanistically characterized activities—economies of the Scientist, of the Technologist, of the Mechanic, on a nationwide scale, in other words: National Industrial Management—Technocracy.

Skill Economics.

The Mechanic's philosophy assumes: the neutral orderliness of Nature; personal freedom; and personal responsibility for the outcome of his acts.

The Mechanic's practice is based upon: personal initiative; self-reliance; and the validity of experience.

The Mechanic's suecess results from: knowledge of Nature's laws; experimental proof; and the elimination of "chance."

It is reasonable, therefore, to assume that upon these fundamentals also must be framed our new work-a-day Skill-economics, in order to be workable in our work-a-day Mechanistic Age.

As applied to our present obsolesecent economics these principles imply:

Elimination of Magic (as a tacitly assumed factor) in the means and methods of produetion.

Elimination of Mystery from our means and methods of exchanging human efforts and resulting products.

Elimination of Chanee from industrial organization and distribution.

Twixt Devil and Deep Sea.

Stated as generalities, few will question the desirability of such changes; for it will readily be conceded that "chance," "mystery," and "magic" are merely expressions of ignorance clothed in old and familiar superstitions. But, when one comes truly to realize—not just verbally admit—how completely magic, mystery, and chance are woven into the fabric of our modern life and thought proeesses, then the true significanee of the propositions strikes the mind with a sense of shock.

We are, indeed, between the devil and the deep sea!

Radieally change we must, or our

"Civilization" will go the way of previous abortive social experiments —Assyria, Egypt, Phoenicia, Greece, Rome, Spain, and . . . Europe.

But, characteristically, the huge majority of us would rather be socially damned in the good old-fashioned way, than accept social salvation through radical change. Yet, if human experience proves anything, it demonstrates conclusively that irrationality cannot persist in the rational Order of Nature.

Chuck-a-Luck Economics.

Thus it will, perchance, be helpful to indicate some implications of the suggested eliminations, by more specific applications to present social, economic and financial customs, usages, and conventions.

Birth, Marriage, Death, are the time-worn dice in our chuck-a-luck economics.

Birth, in surroundings of wealth or poverty—on Fifth Avenue or in the Bowery—decides whether a child shall be a Master or a Servant, an owner or a slave, a nationally controlling factor or one of a million mere "cogs," regardless of inherent fitness to the "chance" ordained position, or to further the aims of the community.

Marriage, under our quaint economic conventions, decides into whose hands shall be entrusted power represented by vast accumulations of wealth, regardless of the chances that the easily acquired wealth may be frivolously squandered or used adversely to national purposes.

Death, with sardonic irrelevance, plays skittles with the lives of the living; for our weirdly jocund "laws of devise" empower dead hands from the grave to control thousands of living men's activities.

Makers and Takers.

Under our "economic and finance system" to be born into our Mechanistic Age with mechanical and constructive traits—dextrous hands, ingenious brain, and irresistible instinctive urge to do, to work, to make the things which constitute our "wealth"—is to be fore-doomed by "chance" to lifelong obscurity, social impotence, and relative poverty; while to be born with instinctive acquisitive cunning and insatiable greed, is to be elected by "chance" to social distinction, wealth and power.

Indeed, it would seem, that of all the facts, circumstances, and incidents, constituting present conditions of human life, "blind chance" has irrationally been selected as the controlling factor in that antiquated collection of queer customs, quaint conventions and grotesque superstitions, that, with childish fatuity, we call our "Science of Economics and Finance."

Magic—Ancient and Modern.

To gage the folly of earlier ages by our own advance is an easy and vanity satisfying diversion; to correctly measure the ignorance and superstition of our own times is a hopeless task.

Thus we look back with smiling contempt upon Devil-raising, Soul-selling, Fountain-of-youth, Witch's-broomstick, and other wondrous paraphernalia of "Black Art." And yet, no essential difference exists between the old witchcraft, by which a "magic potion" added years to human life, and modern "financial" black art which gives everlasting life to inanimate "capital" and endows lifeless "money" with life's unique function—reproduction—so that "money makes money" for ever and ever. Indeed, of the two the modern magic causation is the more crudely illogical and unscientific; for while the ancient black art only purported to prolong life already existing, modern financial magic pretends to perform the still greater miracle of infusing life into inanimate objects!

Do I seem to exaggerate?

Then read what Economic High Priest Boehm-Bawerk says in his "Capital and Interest—A Critical History of Economic Theory"; says seriously, supremely unconscious that he is describing a crazily impossible miracle—a miracle, however, in which there is a substantially universal consensus of ignorant belief.

"And finally it (interest) flows to the capitalist without ever exhausting the capital from which it comes, and therefore without any necessary limit to its continuance. It is, if one may use such an expression about mundane things, capable of an everlasting life.

Thus it is that the phenomenon of interest as a whole presents the remarkable picture of a lifeless thing producing an everlasting and inexhaustible supply of goods."

Was ever gross superstitious ignorance or "black art" more crassly at variance with facts and Nature's Laws or the Sciences of Physics and Mechanics, than this self-filling "magic purse" of financial wizardry?

Time Turned Tailward!

If there is one fact in human experience, the validity of which is beyond question, it is that the onward flow of Time is non-reversible, the future cannot help the present.

We can change the direction of motion in physical things—back up a horse, a train, or a boat, or even in some instances reverse the flow of a river; but to turn back the inexorable forward march of Time is unthinkable.

To suggest shooting the Germans with future bullets and feeding our soldier boys with future food—substituting "future savings" (!) of future generations for present savings and present work, seems—to a Mechanic—like the insane imaginings of a magic-crazed brain.

Yet, these are the stupendous miracles which the "magic of finance" seriously purports to accomplish—for a small present consideration.

Do I seem to exaggerate?

Then read the serious proposal of Financial Wizard Frank A. Vanderlip, President of the National City Bank of New York.

"This war must be financed, not out of past savings, but out of future savings. Future savings are for the moment not available and some other device must therefore be brought into play. That device is bank credit, and this loan and subsequent loans will in the main be floated through an expansion of credit."

Truly human credulity is limitless—or the day of witchcraft and miracles is not past!

Futilities of Magic.

Never in one solitary instance, in all the hundreds of years and millions of sacrificial victims, did entrails of slaughtered animals foretell a future happening; never did any of the armies of Devils and "familiar spirits," invoked by magic incantations, effect any earthly result which would not otherwise have occurred; never was solitary grain of gold transmuted from base metal by the magic of the myriads of guaranteed "Philosopher's Stones"; never did any of these miracles happen—except in the distorted imaginings of the simple ones who paid the Magicians for their futilities.

And the poor boobs who "paid the piper" didn't know any more about magic then, than the average man of today who frankly asserts: "I don't know a damned thing about Economics and Finance."

"Future Savings"!

Recalling practical warlike Rome, fighting her world-conquering battles or refraining from attack on the augury of fowl's entrails; remembering philosophical Greece conducting her civil, military, and economic affairs upon the assumed guidance of similar irrationalities; not forgetting that in comparatively recent times, by "selling indulgences,"—dealing in "future savings," "treasures in heaven," i. e., "floating (super-mundane) credit"—and by commerce in other optimistic and suppositious commodities, "the Church" acquired legal ownership to over half of the land and wealth of England; not overlooking the fact that by similar suppositious means modernized, the Mormon Church of the Latter Day Saints has become one of the wealthiest and socially most powerful capitalistic corporations in our midst today; calmly and dispassionately turning these facts over in the mind, causes one to pause and reflect. Indeed, mentally reviewing this ages long and unquestionable historical evidence, one—embued with modern scientific notions—begins to wonder.

Questions and Doubts.

One wonders how "dollars" or "debts" can be magically endowed with life?

How magically endowed with "everlasting life?"

How magically endowed with the capability of unending reproduction? —"a lifeless thing producing an everlasting and inexhaustible supply of goods."

And thus wondering, one questions and doubts. . . .

Can it be that the "miracles of finance" and the "magic of credit" are of a piece with the ancient miracles and magic?—only, (in keeping with the h. c. l.) gone up in cost to the simple ones who pay for the "miraculous" performances.

But what a cost!

Distribution.

Science and Mechanics have multiplied manifold the productive effect of human effort during the past century, so that the resulting products and instrumentalities of production have increased in like ratio.

So the question naturally arises as to what disposition has been made of this great aggregation of National Commissariat Stores in the United States under our alleged "economic" system?

How have the "Financiers"—our book-keepers—kept tab on the "debits and credits"?

How have they (numerically less than one per cent) distributed this product of the combined work of the twenty million families that, in round numbers, constitute (the other ninety-nine per cent of)the population?

The Balance Sheet.

In round numbers the books show:

$250,000,000,000—"wealth";

$70,000,000,000—gross "profits"; divided:—

$50,000,000,000—"income" to the book-keepers;

$20.000,000,000—"wage" to the families;

$1,000—average family "wage."

Thus the balance sheet shows that the self-selected and socially irresponsible score-keepers—the "Financiers"—have apportioned the gross yearly "profits" of the United States National Industrial Enterprise in the ratio of five-sevenths to themselves and two-sevenths to the 20 million families.

"Business" and Instincts.

In the jargon of "Business," "the Financiers" "charge" fifty billion dollars ($50,000,000,000) yearly for "financeering" the United States.

That is to say: "The Interests" assess the People of the United States fifty billion dollars ($50,000,000,000) "interest" tribute yearly, in perpetuity, for permitting the people the privilege of practicing national honesty—and for the magic of (mysteriously conventionalized) "Credit."

In other words: "The Capitalists" tax the People of the United States fifty billion dollars ($50,000,000,000) yearly for permitting the People the privilege of utilizing the Nation's human and other natural resources—and for (the miracles of) "Capitalization."

In simple terms of human instincts: The Instinctive Takers take the Instinctive Makers' makings for permitting the Makers to make the Nation's natural raw materials into desirable commodities.

Feeding and Breeding.

The families must, of course, be fed and clothed and housed, and the children schooled,—or the supply of Makers would soon peter out.

For these unavoidable necessities the "Financiers" allow, on an average, a thousand dollars a year per family: a "bare living wage" in exchange for a whole year of the brief work-life (of twenty odd years), for life-energy irrecoverably used up in making the wealth; wealth out of which bare sustenance is all that goes to its Makers.

Worse and More of It.

Nor is this all, nor the worst.

It deals with things only, now in existence. And it refers to an apportionment of the gross "profits" arrived at (more or less) by our own consent.

But,—by the wondrous working of "Credit"—the "Financiers" have virtually pawned (in their own pawn shop) the whole Industrial World!

The "Financiers" have placed a perpetual mortgage plaster of at least one thousand billion dollars ($1,000,000,000) on the work and products of unborn generations of the hundred million families constituting the "White World."

The "Financiers" have chained thus a $10,000 debt, paying "interest" tribute of $2.00 per day (for ever) upon the back of each and every family in the "civilized world"—a perpetual thraldom of debt; debt secured by "Bonds," by "Mortgage," by "Capitalization" and by "National Debt" conventions.

The "Financiers" have thus placed this huge mortgage debt (in perpetuity) upon future generations without their consent—the most stupendous case of tyrannous "taxation without representation" in all the dark ages long tragic experience of long suffering humanity.

What petty "Pikers" were the Shylocks of old Nehemiah's day compared to our . . . our . . . "Financiers"!

Crowning Paradox.

Poverty is the opposite of riches; debt the negation of wealth; bankruptcy the reverse of solvency; they are antitheticals—the plus and minus signs of human interaction in the world of "Business."

A modern man, by the aid of scientific and mechanistic instrumentalities, accomplishes more today than one-, two-, and in some cases ten-score men of a hundred years ago; so, despite war and every other destructive agency, production outstrips bare need today as at no time in the past.

The world is constantly increasing its total products.

Yet, notwithstanding these facts, the richer the world grows, the more it owes—both relatively and actually; the greater its wealth, the deeper it is plunged in debt.

Thus, under the regime of capitalistic "High Finance," is achieved the crowning paradox of all time—the acme of miraculous causation:

The functions of plus and minus are reversed; more is less! The larger a thing grows the smaller it becomes! The more efficient men get, the less effective relatively is the outcome! The faster the world cistern is filled with wealth the more nearly empty it is,—the more completely is the White World bankrupt!!

The ancient miracle of "the widow's cruse" is inverted—by modern Financial Magic.

An Old Delusion.

Now it is not intended to impute deliberately dishonest or intentionally unethical methods to our Financiers and Capitalists, under a vague and metaphorical term, "Magic." On the contrary, I use the word "magic" in its ordinary meaning — supernatural effects.

I am convinced that the great majority of us—capitalist and laborer alike—are still obsessed with the fallacy of magic causation; an ancient delusion that has dominated men's minds and befogged their thinking from the very beginning of man's efforts to explain the causes of unusual happenings.

"Magic" is the oldest and easiest way to account for strange things, and still holds its ancient sway over men's minds outside the laboratory of the scientist and the workshop of the mechanic.

Elimination of this fallacy as a controlling factor in the distribution of products—wealth—is a necessary step toward a rationally workable economic system; a system adapted to 20th Century life and the mental attitude of our science-made Mechanistic Age.

Mystery.

"Chance" implies insufficient knowledge of causes.

"Magic" implies misinterpretation of causes.

"Mystery" implies inherent unknowableness of causes.

While increasing knowledge tends ever toward minimizing the "chance" element and lessening of "magic" errors, mystery presents a different problem.

The laboratory, or the factory, or the workshop, or the countinghouse, is no place for "mystery," for to the workers therein mystery means ignorance—lack of intelligence. In human life at large, it is quite otherwise as concerns the essential All-inclusive Mystery and religious mysticism. This is a fact of profound significance in relation to the larger aspect of our "Social Problem."

Our new Skill Economics, therefore, may not discourage man's innate love of mystery,—his inborn religious spirituality — nor curb the spirit which tempts him to adventure courageously into the unknown; but instead should provide advantageous scope for its personal expression.

But—as in the machine shop—"mystery" is out of place in finance; out of place because the function of

"money" in an economic system corresponds to the purposes of checks and gauges, templets and measuring instruments of the technologist and the mechanical constructor.

The essentials of such devices are accuracy, certainty, invariability—the antitheses of the qualities of mystery.

Yet in no branch of human activity are its measuring devices so inconsistent, contradictory, inaccurate; so mysteriously variable, so subject to anti-social self-interested control as are those of the Financier—his twin mysteries, "Money" and "Credit."

Our Queer Dollar.

One of the many quaint functions of the dollar is that of a "standard of value." As a matter of fact, no one knows or can determine from moment to moment, what is the value of a dollar. We only know that its worth is diminishing, variously, to the vanishing point.

Neither the Nation nor the Monetary Experts, nor the Professors of Economics, nor the Financiers, nor the Interests, nor the Capitalists, nor the Common Man, have ever succeeded in fixing our "standard of value"—standardizing the value of our "standard of value"—the worth of our Dollar.

Mr. Worker contends that the contraction of the dollar is due to expansion in the cost of living; so he strikes for more dollars, and effects another shrink. Mr. Trader says the contraction is due to the expansion of wages; so he boosts up the price of products, and effects still another contraction. And so on and on, and the end is not yet!

Indeed, there are as many different explanations of this mysterious "spooky" phenomenon in our "Standard" almost as there are explainers—and their number is legion.

An Elastic Foot Rule!

If our foot-rule were subject to similar mysterious fluctuations, its length would have increased to a yard or more in the past five years, with innumerable variations from time to time.

Imagine the chaos, had such a mysteriously variable standard of measurement been used in the machine shop!

The stress of War conditions has so completely demonstrated the inutility of our mysteriously elastic so-called "standard of value and medium of exchange" that it is now virtually in the discard,—stacked up uselessly in private and in national treasury vaults.

Our alleged "standard of value and medium of exchange" never was a standard of value, and now it is not even a medium of exchange. Quaint, but true!

A practically costless, hence unvarying, "medium of exchange"—a one-function money—is another much needed step toward a rational economic system.

Credit.

But if our money is a mysterious commodity, what shall be said of "Credit"?

"Money"—i.e., "gold coin of the United States of the present standard of weight and fineness"—even though lacking in practical utility, is at least a physical commodity. It occupies space (however uselessly); it has color, weight, length, breadth and thickness,—it possesses physical characteristics easily determinable by scientific tests.

Not one of these facts is applicable to "Credit."

"Credit" is a state of mind, a psychological condition—hypnosis—a mesmeric dream. Naturally it lacks all the qualities of physical things, and possesses all those of phantasms. A man dreams he is wealthy, and—for all dream purposes—he is wealthy; even though in actual fact he is dying of starvation in squalor and want.

So too, in like manner, a nation dreams itself some (or many) billions of additional wealth; sets the printing presses going to record the dream—in "bonds"; and forthwith becomes billions wealthier (in its mind), though, as a matter of fact, the physical wealth may have shrunk to the danger point of general indigence and starvation.

This is the danger-fraught "World condition" today.

Boundless Credit Wealth

Seemingly human stupidity is limitless and human credulity infinite! This boundless, unweighable, unmeasurable, hope-created dream-stuff ("Credit") is sliced and apportioned, like beef or butter, and sold in the market place by self-appointed purveyors of public optimism.

Yes! Sold and exchanged for the limited, measurable, physical products of sweaty and grimy toil and strenuous human effort.

Like all other dreams and dream-stuff, "Credit" visions know no bounds but those of desire. Millions or billions or scores of billions—it's all the same in the wonderland dreamworld of "Finance": wish them and dream them, and presto! they exist. They exist: dream ships, dream cannons, dream food—iridescent wealth bubbles blown up and "floated through an expansion of credit," as proposed by Finance Wizard Vanderlip.

Dream Wealth.

It is not surprising therefore that in the wonderland of Finance this dreamworld's dream wealth "Credit" —as represented by "credit instruments," i. e., stocks, bonds, mortgages, national debts, etc.—transcends greatly the workaday world's physical utilities—real wealth.

But what is going to happen when we are jolted awake to the rationality of workaday reality, and dream visions vanish; when the airy floating credit bubble bursts—as bubbles do? When Germany and Austria follow Russia's (Bolshevik) example, and France follows Germany, and then England, and then . . . ?

Then what?

When this happens, the world will discard the silly delusion that time is reversible by financial magic—credit; "credit," the greatest of all myths and magic makebelieves by which cunning men in all ages have sought to get something for nothing.

In all the historically recorded cases of collective human delusions—from practical Rome's entrail augury to shrewd Yankee Salem's witchcraft—there is none which surpasses, in collective crass credulity, our great Credit Myth!

A national (non-tribute) bookkeeping system equitably to determine real ownership of the products of effort, is a much needed economic convenience.

Experimental Science.

It would seem that with the advent of Experimental Science occurred an epoch in the history of our Race; an epochal event to which none other is comparable, except possibly the acquisition of Self-consciousness itself. Indeed it would seem that these two super-significant events—so unthinkably far apart in time—are, in essence, closely related.

By coming to Self-consciousness the Brute became Man—potentially, though not actually, a self-determining being.

By the coming of Science—based upon the idea of the rationality and neutrality of "nature"—potential Freedom ceased to be a mere possibility and became a realizable Ideal.

To Make or Break Shackles.

Science and Technology are, however, but tools in Man's hands; tools wherewith to make effective Man's transcendent privilege: Freedom of Choice.

Groups of men (like Germany) may use these great instrumentalities to forge social shackles upon themselves, and upon Humanity the bondage of autocracy.

Or, they may use them to make human Liberty effective, as is the ideal of the United States.

Human beings, whether as individuals, or as groups, or as nations, are "free" — self-determining — only when purposively initiative; for it is only in purposive action that liberty can be expressed.

Freedom, then, means will to intelligent self-expression — liberty expressed in rational accomplishment.

"Reconstruction."

On all the foregoing considerations, our problem of "Social Reconstruction" on a scientific basis implies systematizing our great but inchoate Nation upon economic principles appropriate to an Industrial Democracy.

The basis of modern industry being scientific knowledge of nature's laws whereby nature's resources are made available for human use and enjoy-

ment through the aid and agency of technical skill. "Reconstruction" becomes essentially a process of selective rejection of present inappropriate economic usages; discarding customs which unduly facilitate the acquisitive instincts, and substituting others which tend to minimize social obstacles to the freer expression of the constructive or industrial instincts—in the interest of the commonweal.

As industrial processes involve specialized skill and expert technical training, made effective by intelligent co-ordination, it is clear that a humanly efficient Industrial Democracy necessitates leadership by those who possess the requisite knowledge, skill, and technical training.

So, when we speak of Industrial Democracy, what we really mean is: Nation-wide Industry managed by Technologists—a Nation of free and socially equal workers, scientifically organized for mutual benefit and unified purpose—a Technocracy.

Suggestions.

By way of summary, a few of the more obviously inappropriate present usages which, seemingly with advantage, we might consign to the limbo of outworn social expedients, here follow:

(I) Discard usages founded on the autocratic idea of "the State";

Substitute therefor—in fact as well as in theory—others resting upon the self-evident right of a man to inalienable and complete ownership of himself; hence (in effect) inalienable ownership of the industrial product resulting from the functioning of his mind and body—limited only by others' equal right.

(II) Discard conventions resting upon the parasitic idea that (legal) possession is equivalent to production;

Substitute natural ownership based on making for conventions that legalize taking.

(III) Discard institutions legalizing "chance" as a controlling factor for the distribution of things;

Substitute therefor collective foresight based upon experience; and human need for instinctive animal greed —in the interest of the commonweal.

(IV) Discard "financial magic" practices resting upon the animistic fallacy that inanimate objects can (by convention) be endowed with life's unique function—reproduction;

Substitute others on the evidential fact that only human beings can make usefully available the things we call "wealth."

(V) Discard the "mysteries of finance" in wealth distributing processes—the private purveying of public optimism for gain and the "manufacture of credit" for sale;

Substitute therefor a community (national) bookkeeping system, in which figures clearly tell what each individual and each group has added to the common stock.

(VI) Discard institutions resting upon the erroneous notion that conventional symbols, i. e., "representatives" of wealth, "bonds," "credit," "capital," etc.—are equivalent to and can perform the functions of the instrumentalities they "represent," and can continue so to function long after the instrumentalities have ceased to exist or have become obsolete;

Substitute others making the useful content of things, i. e. "usury," "interest," correspond to and be contingent upon the effective worth and the continued usefulness of the things rented.

(VII) Discard customs based upon mystic symbolism and the animistic fallacy that "money" can perform the functions of the life-energy or products "represented";

Substitute a costless one-function national check medium of exchange.

(VIII) Discard "business" practices based upon the anti-social dictum that: "one man's misfortune is another's opportunity";

Substitute therefor the proposition that: the illhaps of unavoidable social hazards and chance favors of good fortune should (in social effect) be equally shared by all.

(IX) Discard all institutions and conventions facilitating the functioning of anti-social predatory and parasitic instincts;

Substitute others tending to encourage willing self-interested cooperation energized by national unity of purpose.

(X) Discard the strife inducing institutions of group industries based upon the hunger-slavery idea of employer and employee organized for mechanistic human efficiency in output of products for purely private profit;

Substitute others based upon rational human initiative and development with the aid of all the resources of the Nation, co-ordinated for the commonweal under the management of Scientific Leadership to accomplish a consensus National Objective.

Save Civilization!

Whether these proposed changes are effectively workable or are only "visionary," "impracticable," "Utopian dreams," is, of course, debatable; but there can be no question regarding the truth of the solemn warning of Lloyd George: "Civilization, unless we try to save it, may be precipitated and scattered to atoms."

Responsibility.

That our Civilization is in danger of being "shattered to atoms," raises the question of culpability for the present ominous state of affairs, and hence of responsibility for averting the threatened outcome.

The Masses cannot be held responsible, for they are simply impelled by their instinct "to live"; they do not think, they do what is much more important: they breed. Their magnificent all-inclusive social function is reproduction. Hence, they feel—feel hunger, feel passion—they feel with all the vital energy of the race.

Thus, when social conditions become unbearable or threaten their vital function, they reflex with unrestrained ferocity against such conventional restraints to the natural expression of their instinctive urges.

The Skilled Artisans cannot be held responsible, for they are merely obeying the instinct "to make." Their mental activity is analogous to—and for the same social purpose as—the cycle of brain functioning that produces the mathematical cell of the bee, the carpentry of the beaver, and the nest building of the bird.

The Employers cannot be held responsible, for they only express the instinct "to control," the Mastery instinct—an urge which could not be satisfied unless others willingly submitted to domination. Their social function is to energize—to counteract human inertia—for the preservation of the Race.

The Financiers cannot be held responsible, for they only reflex the instinct "to take," the urge to hoard, like—and for the same social purpose as—the hoarding of the squirrel or the honey storing of the bee. They probably are least imaginative of all. Their social function is conservation, the converse of progressive thcorizing.

Typically, none of these social elements think; think in the sense of the imaginative pioneer theorizing of creative thought—seeking for truth apart from its immediate application to self-preservation—searching with spiritual insight for paths into the unknown to be later trod by careless earth-bound feet.

The Scientist is in a different category. Characteristically he lacks the instinctive urges which distinguish the other elements of human society.

But, it is his social function to think.

He does think—he has functioned with a vengeance!

One of the results of his high-pressure thinking is that: "Civilization may be shattered to atoms"—or Humanity raised to Godlike heights, by Science.

While it is quite questionable whether Science, so far, has proved a blessing or a curse to Humanity, there can be no doubt that its potentialities in either direction are limitless. Praiseworthy or culpable, as the case now stands, responsibility for the outcome rests squarely upon the shoulders of the Scientist.

National Leadership.

Notwithstanding appearances to the contrary—popular unrest, growth of socialism, spread of I. W. W.-ism, the whirlwind of Bolshevism and other terrifying upsurgings of destructive Massism—the "Masses" do not desire to lead, do not seek "proletarian dictatorship."

Human herds have always followed leaders, like other gregarious animals; followed their leaders willingly, blindly, thoughtlessly.

The herd will follow till following becomes vitally dangerous, threatens its social life—hinders the normal functioning of its instinctive urges to growth and reproduction.

Nations have followed the leadership of Autocracy till starved white by plundering conventions or bled white by wars.

Nations have followed the leadership of Theocratic Mystics into

mental chaos, and confusion of human ideals and social purpose.

And we today, with sheeplike docility, have followed Plutocratic leadership into a social morass of crazy financial conventions, till the raising of families has become an unbearable burden, an impossible social handicap; till the opportunity to work is a dubious privilege; till the future of the worker and breeder—the proletarian—offers only a soul shriveling bondage of debasing and inescapable debt!

Modern Manhood's Mandate.

The present "World condition" means only that the proletariat has balked, revolted, at this sordid threat to the sanity and the sanctity of Human existence.

The "World condition" is a World Cry!—a cry not for Proletarian Dictatorship, nor for Mob Rule, but for new Leaders.

The World demands new Leaders! Not new and more "efficient" slave drivers—Trust Barons, or Kings of Commerce, or Emperors of Finance.

The Modern World demands modern Leaders, Men! Men with ideas that rise higher than swapping jackknives—even in carload or shipload lots.

The "World condition" expresses this demand by modern men for modern leaders, leaders with modern spiritualized ideals.

Our "Social Unrest" is a demand for torch-bearers and pathfinders to social freedom of opportunity; a demand for leaders with luminous imagination to visualize our War-born Nation's desired Peace Goal; leaders with scientific knowledge to realize and actualize the rational aspirations, ambitions, and ideals of free modern American Manhoood.

Scientist vs. Auto-, Theo-, and Pluto-crat

While the Autocrat, the Theocrat, and the Plutocrat, are decadent products of outworn ways and obsolescent materialistic manners of thinking, the Scientist, on the contrary, is the most modern development of modern intelligence, modern ideals, and modern spiritualized modes of thought.

The Scientist is essentially a pioneer, a pathfinder, a torch bearer, a seeker after Truth and Rationality.

The Scientist is the modern religionist, the priest of selfless Truth: Truth which grows with Man's growth and luminously emerges with the purifying of human Intelligence: Truth—that all-inclusive Something behind the physical facts of nature which makes for Right—for mechanical, for personal, for ethical, for spiritual, for social righteousness—the ultimate Unifying Ideal.

Truly, "the stone which the builders rejected is become the head of the corner": the keystone of the social arch.

Rational Leadership.

The Scientist is, seemingly, our one best, if not our only hope for Rational Leadership.

Then, too, the Scientist—by unleashing the limitlessly powerful natural forces, in uncoordinated, haphazard science-made instrumentalities—has got us into much of our present social muddle.

So it is up to the Scientist to lead us out; or at least, to harness for human service the science-created non-moral mechanistic monster that he has liberated.

Guideless and Aimless!

But if the Scientist shirks this great task, if he lacks the desire for, or the courage of, or the will to Leadership; if for any reason he evades this obvious responsibility, or is daunted by its obvious difficultics . . . then indeed, blindly plunging deviously onward—guideless and aimless—"our Civilization may be precipitated and shattered to atoms," and our Industrial Democracy adventure prove a World Tragedy.

Yes! the most pathetic of all human tragedies—futility.

Lacking: Purpose.

Our Nation of great expectations, of magnificently vague hopes and stupendous possibilities, (if nothing worse happens), will slump into futile pottering desuetude, lacking inspiring purpose to live for, lacking worthy achievement to work for, lacking worthwhile goal to strive for, lacking —a Great National Objective.

Fernwald, Berkeley, March 20, 1919.

Working Explosively

A Protest Against Mechanistic Efficiency

By William Henry Smyth

(Reprinted from Industrial Management, January, 1917.)

We all know the Explosive Worker type and generally recognize him with disapproval.

The trouble with working explosively is that the individual addicted to this character of activity won't fit into any decently-organized scheme of production. He's a sort of human bombshell—lacking a timer. So he "goes off" at any old time, day or night—always unexpectedly—with the utmost disregard to sensitive nerves and established conventions.

In the family he's the juvenile "problem"; in school, the hopeless impossible! and in the shop, the idlest of idle apprentices (with a big ?). In the factory, he's the man one is always going to discharge,—but . . . Or he's our Boss, who is "a Holy Terror."

Working Explosively.

There are but two places for the Explosive Worker to land—at the top or at the bottom. And, characteristically he's rapid in getting there. Still worse, when true to type, he is disconcertingly apt to reverse his location from time to time, whether top or bottom, with the speed of a lightning change artist.

The Efficiency Expert has no place for the Explosive Worker—except in his vocabulary of dynamic expletives and fulminative epithets.

Of course, all this refers to the typical Exploder; but, curiously enough, each one of us at times looks back with self-hugging secret joy to occasions and experiences of working explosively in our own otherwise humdrum career. And, reflecting, realizes with some surprise that these stand luminously out as our really worth while adventures—life's decisive battles.

Such reminiscences, and the feelings evoked, jolt one into thinking—to wondering. . . .

Work Is Human.

There appears to be, nay, there surely is, something amazingly humanly human about working explosively. We feel that there is truly something warm, vital, hot-blooded, about this sort of activity which is lacking in the efficient routine of eight-hours-a-day work at so-much per.

In fancy we flit backward and abandonedly re-erupt our own little explosions. . . . Eight hours!—Pah! Twenty-four is all too short! Hours! Days! What are they to the Explosive Worker—during eruption. Mere irrelevant astronomical incidents.

But,—with a sigh—returning to here and now—from memory's fecund realm, where we too forged vibrant dreams most strenuously into things of beauty, worth and substance, painted with comets' tails, playing skittles with time and space—(Oh magic state, wherein all work is play, and play means working explosively!)—there still remains that work-a-day reminder, the vivid impression, potent intuition, the "hunch" of discovery, so suggestive of revelation in its flash-like clarity.

And this is the "hunch":

Essence of Living.

Explosive Working? Why, explosive activity is not "working" at all! It is the essence of living. Life itself!

"Efficient" working and working explosively are wholly and essentially different matters of experience.

"Efficient" working expresses obedience to the outside pressure of brute mechanistic Nature in the struggle to survive.

Working Explosively is inner life insistent of self-expression, the willful impulse of vital personality in rapturous culmination, realizing life—the joy of being expressed in doing. God-like spontaneity.

One means Compulsion; the other Freedom.

Routine working is an efficient means to an indefinitely desirable end. Explosive Working is an end in itself, regardless of outcome. The very joy of working. Self realization.

One suggests Force and Mechanism; the other, Life and Liberty.

In one we function, contract, and serve a purpose; in the other we live, expand, dominate. In one we work by necessity as more or less efficient "elements" in a mighty but cold and incomprehensible machine; in the other I am the living IT—Earth-God of things, of matter, and of motion—the Mechanician.

Is Human Problem.

This issue involves no mere moot or academic distinction, about which idle men may split dialectic hairs or bandy fluent phrases to fill a vacant hour. Profoundly is it otherwise, for it touches closely on the deepest and most significant of all human problems—the eternal paradox of freedom. At bottom it is this question of human worth as against human productive efficiency which is being fought out in the World-conflict today—and not alone in the spectacular European tragedy.

So much for the "hunch." And now for the questions which it raises.

These are many tough conundrums, which I have no intention of now attempting to answer.

Here is one, by way of example:

Is the ultimate outcome of mechanistic efficiency humanly desirable? Is the Art of Efficiency itself efficient?

Clearly, there is no place in this "Art" for "Explosive" working; and less than no place for the "Exploder." Both are too spasmodic, orgastic, convulsive; and either would burst into its ultimate primordial atoms the most systematic efficiency organization ever invented. Yet, almost equally clear is it, that without both of these joyous unruly factors there would be no Art—dramatic, artistic, nor even productive—in which to be efficient, to practice the Art of Efficiency.

Often Overlooked.

A real Art of Human Efficiency must, of course, take cognizance of the inherent characteristics of the human elements; and the most basic quality of life—certainly of life exemplified in Man—is this very quality of explosiveness—explosiveness which we all so commonly overlook and insistently ignore till made to sit up and take notice by some extra-violent eruption in our own vicinity, or in one's own self.

Here, then, seems to be a fundamental difficulty: Efficiency requires control in order to be efficient. But human beings, to be human, must freely effervesce—uncontrollably erupt—or contract to mere efficiency routine-output-producing machines.

This raises the question at once: To what end is the modern Art of Efficiency directed? What is its consciously desired goal?

Of course, we all know the obvious and seemingly conclusive answer: To make better men—in order to increase their productiveness.

This answer, it seems to me, instead of being conclusive, only raises another string of deeply vital questions.

Is "Efficiency" Efficient?

Can an Art of Efficiency, dealing with human elements incidentally, but with products as its first consideration, conceivably result in other than ultimate disaster to the incidental "elements"?

Can the finished human output of our boasted Art become more desirably Human and less machines than the inefficient human raw materials?

By Efficiency's first law, must not the primary object necessarily divert to itself all consideration—de-humanize the Human Element into highly efficient mechanisms for production?

Is mechanistic efficiency Humanly efficient?

Is the Art of Efficiency, by any chance, mis-directed? Misdirected towards products as an end in itself, instead of towards the development of vitally initiative human individuals—joyous workers, to whom product is a by-product, wealth an incident—MEN, who, for the very joy of the working, work explosively?

Fernwald, Berkeley, November, 1916.

Working Explosively Versus Working Efficiently

By William Henry Smyth

(Reprinted from Industrial Management, May, 1917.)

Between working efficiently and working ineffectively there can be no question as to which is the more desirable, nor would I raise any such issue.

"Working Explosively" is not an argument for inefficiency, quite the contrary. The article, as I intended it, and as I think it indicates to the thoughtful reader, is merely a Stop! Look! Listen! signal; a hand raised; a suggestion to pause—pause a moment to consider whether we are intelligently directing our efforts toward the end for which we seek, the goal for which we strive, the reward for which we all struggle.

My own experience with life ranges through the whole gamut, from the coarsest forms of manual labor up to original constructive mental work, both as employed and employer—at the grind of "working efficiently" and the joy of "working explosively." I have associated on terms of equality with hoboes, with laborers, with mechanics, and with captains of industry and finance. And far from being a socialist, I am individualistic to the nth degree. Thus, my Stop! Look! Listen! warning is based on facts, and upon experience, not upon the fancies of an overwrought imagination.

Importance of Worker

Based upon this varied experience, the question I wish to raise involves the relative importance of the worker, or his work—human worth, or the products of human toil.

Efficiency is no new invention; it is as old as intelligence itself. None realize efficiency so completely as the creative genius,—our Darwins, Faradays, Edisons, and Fords,—and none so completely practice and exemplify working explosively. Genius itself, we are told, is the capability for taking infinite pains.

The Art of Efficiency proposes to substitute the short cut of imitating efficient mechanical tricks for the toilsome process of becoming a mechanic.

The Explosive Worker is a strenuous worker whose intense preoccupation is with accomplishing perfectly that predetermined end in which his interest is centered. He works with intelligent personal intention driven by the explosive energy of his purpose. If he is driving rivets, he is driving them so that they will accomplish the object intended.

Working Explosively is human purpose expressing itself through inanimate material; it is not the function of an unhurried efficient human machine striking so many well directed blows in a definite time.

Means Personal Energy

Working Explosively means personal energy, strenuously applied to the accomplishment of a personally desirable result.

Working Explosively is not a matter of habit, instinct, or routine. It involves the concentration of all the faculties upon the work in hand to the end of producing the result desired. It is subconscious impulse raised to conscious effort of accomplishment.

The Efficiency Expert joyously fills his God-like function as he shuffles numbered human "hands" and rearranges his human "pegs" into round or square holes, so that "hands" and "pegs" shall contribute most efficiently to production. But, soulless pegs and automaton hands which will passively stay put are somewhat different factors from Men and Women with personal likes and dislikes and smouldering passions which must explode either in Work or War—hence industrial unrest and warfare.

The "Art of Efficiency" is merely a new name for an old and very dangerous form—or misdirection—of effort.

The essential question is not how many more billion dollars worth of product can be made or saved, but how many more million human beings can express themselves in the direction of personal accomplishment. And, in my view, this latter course is the more logical and the more likely one to produce the former results indirectly through the interest of the worker than directly through the efficient control of his action.

Outside Worker

"Working Efficiently" assumes control outside of the worker, directing his actions and efforts toward a purpose in the mind of the controller.

"Working Explosively" assumes control inside of the worker, directing his action and energy towards an interesting outcome.

In a broad sense, one is Autocracy and the other Democracy. Imperfectly but significantly, Germany and the United States represent these two opposite ideals of human activity. The one represents efficient working, the other a crude and embryonic form of working explosively. One makes for mechanistic efficiency, the other for human liberty.

Hopefulness is a personal quality, it cannot exist in connection with work in the outcome of which the worker is not interested, and Hopefulness is a fundamental factor in working explosively.

"Working Explosively" and "Working Efficiently" express only imperfectly the underlying idea in each. In essence, they imply two opposite ideals. In the former, emphasis is placed upon the worker; in the latter, emphasis is placed upon the work. To my way of thinking the two points of view are essentially antithetical.

Of course, the only way of bringing about the welfare of human kind is on the basis of right and justice. But, who shall determine these momentous bases? You or I? The Efficiency Expert or the "pegs" which he re-arranges into round or square holes? The employer or the employed?

Conflict Exists

To close our eyes and pretend that there is no conflict between employer and employed is futility itself. To say that the interest of these is mutual when the employer has all of the joy of working explosively and the employed all the grind of working efficiently is equally futile.

I gird neither against employer nor employed. My proposition is: from the joy of the work—Working Explosively—come better men, more worthy citizens, and greater commonweal.

I hold that a human being—human personality—is of infinitely more consequence than the product of the hands and brain; that a true ultimate efficiency implies the liberation of Man rather than the efficient control of his actions; that the ultimate well-being of all implies not the intelligent control of passively efficient human elements, but the liberation of men and women to purposeful joy of Working Explosively.

Fernwald, Berkeley, March, 1917.

IS THE EFFICIENT CONTROL OF MEN MORE DESIRABLE THAN FREEDOM?

SHOULD THE SELFISH CUNNING OF FINANCE OR UNSELFISH SCIENCE AND TECHNOLOGY MANAGE INDUSTRIAL DEMOCRACY?

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AN AIMLESS MAN AND A PURPOSELESS NATION ARE EQUALLY FUTILE FRAGMENTS OF RAW MATERIAL IN THE EVER GRINDING MILL OF NATURAL EVOLUTIONARY AND DEVOLUTIONARY PROCESSES: LACKING NATIONAL PURPOSE WHAT GOAL HAS PATRIOTISM

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